TEMPORARY MODIFICATION TO LIVESTOCK GRAZING USE IN THE CALIFORNIA DESERT CONSERVATION AREA

ENVIRONMENTAL ASSESSMENT NUMBER
CA-610-01-02

California Desert District

April 9, 2001

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CHAPTER 1: INTRODUCTION

On March 16, 2000, the Center for Biological Diversity, Sierra Club, and Public Employees for Environmental Responsibility (Center (et al.)) filed for injunctive relief in U.S. District Court, Northern District of California (Court) against the Bureau of Land Management (BLM). The Center alleges the BLM was in violation of the Endangered Species Act (ESA) by failing to formally consult on listed species with the U.S. Fish and Wildlife Service (FWS) on the effects of adopting and implementing the California Desert Conservation Area Plan,1999 (CDCA Plan). On August 25, 2000, the BLM acknowledged through Court stipulation that activities authorized, permitted, or allowed under CDCA Plan may adversely affect threatened and endangered species, and the BLM is required to consult with the FWS to insure that adoption and implementation of the CDCA Plan is not likely to jeopardize the continued existence of these species or to result in the destruction or adverse modification of critical habitat. To avoid unnecessary litigation likely to occur between the Center and BLM after the Center files for injunctive relief to immediately prohibit all grazing activities that may affect listed species, the parties agreed that activities could continue through Court ordered stipulation.

The California Desert District of the BLM is proposing to implement all items formulated during settlement agreement discussions between the BLM and Center for livestock grazing activities contain in Stipulation and Order 3 and items 16 and 17 of Stipulation and Order 5. All items listed in these stipulations are effective upon signature by the Center and BLM. Stipulation 3 was signed by both parties on December 22, 2000 and Stipulation 5 was signed by all parties on or before January 17, 2001. On January 29, 2001, Judge Alsup signed Stipulation and Order 3.

Under this proposed action, the agreed upon measures directly and indirectly affect 3,628,440 acres of Public Land within 42 grazing allotments (see Vicinity Map). Most grazing allotments include some private and State lands, but some allotments can have several ownerships including but not limited to private, State, U.S. Forest Service, U.S. National Park Service, and other federal lands. These lands comprise 1,130,844 acres, and on average, 24 percent of any allotment has some other ownership within the boundary (see Table 1). Most allotments are located within the Mojave Desert, but four of the 42 allotments are found in the northern portion of the Colorado Desert. Some portion of the affected allotments is within or adjacent to desert tortoise habitat. All allotments have some lowlands and these areas are typically tortoise habitat, but elevation within an allotment can vary from 3,000 to 6,500 feet. Creosote bush is the most obvious and common perennial plant found on most of the allotments.

Need for the Proposed Action

The proposed action is necessary to continue authorizing livestock grazing in desert tortoise habitats in accordance with agreed upon terms and conditions for sheep and cattle use. The proposed action is an interim action and complies with 43 Code of Federal Regulations(CFR), 4100 and would be consistent with the provisions of the *Taylor Grazing Act, Public Rangelands Improvement Act, Endangered Species Act, and Federal Land Policy and Management Act.* This proposed action would cease

upon receipt of biological opinions of recently submitted for land use plans and the current direction of the California Desert Conservation Area Plan or completion of other required actions. Modification of grazing activities under the proposed action is necessary to improve or maintain habitat conditions for the desert tortoise and to improve riparian vegetative conditions.

The specific provisions affecting livestock grazing will only be in effect for the individual grazing allotments upon issuance of a biological opinion from the U.S. Fish and Wildlife Service covering grazing activities in accordance with the CDCA Plan, as amended or on January 31, 2002, whichever is later.

Plan Conformance

The proposed action is subject to the California Desert Conservation Area Plan (CDCA Plan) 1980 as Amended (August 1999). The proposed action has been determined to be in conformance with this plan as required by regulation (43 CFR § 1610.5-3(a)). The proposed action would occur in areas identified for livestock grazing as indicated in the Livestock Grazing Element in the CDCA Plan 1980 (1999), pages 56 to 68. The proposed action is consistent with the land use decisions, and goals and objectives listed in the CDCA Plan.

Relationship to Statues, Regulations, and Plans

Endangered Species

All but one of the grazing allotments are within the range of federally listed threatened or endangered species. Pursuant to Section 7 of the ESA, formal consultation with the FWS is required on all allotments for which livestock grazing may affect listed species. The terms and conditions for grazing use of any grazing lease or permit (hereafter referred to as lease) may need to be modified to conform to the mitigation measures (terms and conditions) specified in a FWS biological opinion. In addition, the terms and conditions of any grazing lease may also need to be modified through subsequent land use plan amendments or revisions to conform to decisions made to achieve recovery plan objectives. The Northern and Eastern Colorado Coordinated Management Plan, Northern and Eastern Mojave Plan Amendment, West Mojave Management Plan, and the Coachella Valley Management Plan are in the draft stage or soon will be drafted and would amend the current CDCA Plan to address ESA concerns.

Several of the allotments also provide habitat for State listed fish, wildlife, and plant species. According to the MOU between BLM and CDFG we agree: “to notify the Department of all projects involving impacts to, or manipulation of, State-listed rare (threatened) and endangered fish, wildlife and plants and to obtain State recommendations of the project-specific management of such populations.”

Cultural Resources

California BLM has explicit responsibility to manage cultural resources on public lands consistent with applicable procedures and agreements. The proposed action and alternative 1 would not impact cultural resources on public land.

Wilderness
Wilderness and wilderness study areas are found in or adjacent to 16 allotments (see Table 2). Grazing activities currently occur in wilderness and wilderness study areas. Under the proposed action and alternative 1 no impacts are expected to occur above those impacts already occurring under current grazing management.

Water Quality
Activities related to grazing livestock may degrade the quality of water for natural occurring water sources such as springs or seeps. Any changes in grazing management or soil (surface) disturbing actions would be reviewed further for potential impacts to water quality. Best management practices would be employed to mitigate or avoid these potential impacts.

Air Quality
Generally, livestock grazing on public lands would not conflict with federal or state air quality standards. Where livestock grazing occurs within an area classified as a federal non-attainment/maintenance area by the Environmental Protection Agency, BLM has made the determination that this action is in conformance with the applicable State Implementation Plan (SIP) requirement. Generally, livestock grazing activities authorized on public lands would not exceed de minimus levels.

VICINITY MAP

CHAPTER 2: PROPOSED ACTION AND ALTERNATIVES

Proposed Action

The proposed action will continue to be in effect for livestock use within 42 grazing allotments until either 1) receipt and implementation of any terms and conditions or reasonable and prudent measures or alternatives from a biological opinion from the U.S. Fish and Wildlife Service and the signing of the records of decision for the NECO and NEMO bio-regional plan amendments, or 2) January 31, 2002, whichever is the latter of the two periods. A lessee may request complete grazing non-use for an allotment during the time-frame listed above and applications for potential grazing use would be rejected during this period. The National Fallback standards and guidelines would be implemented through prescribed actions originating from rangeland health assessments of allotments. Unless modified by the proposed action, grazing use would continue under the current management.

The 13 terms and conditions listed in the current biological opinion will continue to apply for sheep grazing activities in desert tortoise habitat. Sheep would continue to graze all areas within the boundary of Antelope Valley, Boron, Bissell, Hansen Common, Rudnick Common, Spangler Hills, and Tunawee Common Allotments (see Table 1 for potential acreage). Sheep will not be able to graze any area of Ford Dry Lake, Goldstone, Gravel Hills, Rice Valley, and Superior Valley Allotments (see Table 1). Sheep would continue to graze most but not all areas within the boundary of Buckhorn Canyon, Cantil Common, Johnson Valley, Lava Mountain, Monolith-Cantil, Shadow Mountain, and Stoddard Mountain Allotments (see Table 1 for acreage excluded).

The 41 terms and conditions listed in the current biological opinion will continue to apply for cattle grazing activities within allotments in desert tortoise habitat. Livestock would continue to graze all areas within the boundary of Clark Mountain and Valley Well Allotments. The annual amount of cattle use would be limited for Cronese Lake, Harper Lake, Lazy Daisy, Ord Mountain, and Valley Wells Allotments (see Table 1).

Cattle would not graze Pilot Knob, Piute Valley, Chemehuevi, Jean Lake, Crescent Peak, Kessler Springs, Lanfair Valley, and Whitewater Canyon Allotments nor a portion of Valley View Allotments. Reduction in the number of animal days per year would occur when livestock are found again (second offense) in the area of total exclusion on Pilot Knob, Piute Valley, Chemehuevi, Jean Lake, Crescent Peak, Kessler Springs, Lanfair Valley, and Whitewater Canyon Allotments and a portion of Valley View Allotment. Cattle would not graze a portion of Hansen Common, Lacey-Cactus-McCloud, and Tunawee Common Allotments nor all of Round Mountain Allotment.

Cattle would continue to graze all areas within the allotment except for specific areas from March 1 to June 15 and from September 7 to November 7 within Cady Mountain, Cronese Lake, Harper Lake, Horsethief Springs, Lazy Daisy, Ord Mountain, Pahrump Valley, Rattlesnake Canyon, Rudnick Common, Valley Wells, and Walker Pass Allotments (see Table 1). An additional day would be added to the period of exclusion for every day cattle are found inside areas designated for seasonal

exclusion from March 1 to June 15 and from September 7 to November 7 for Cady Mountain, Cronese Lake, Harper Lake, Horsethief Springs, Lazy Daisy, Ord Mountain, Pahrump Valley, Rattlesnake Canyon, Rudnick Common, Valley Wells, and Walker Pass Allotments.

In the Rattlesnake Canyon Allotment, an area of Rattlesnake Canyon would be fenced by June 1, 2001 to exclude cattle use and trailing, and cattle use would be reduced commensurate with the forage loss from the excluded area (see Table 1 and 3). The east boundary fence of the of the Rattlesnake Canyon Allotment would be started by January 17, 2001 by BLM fire crews and completed as soon as practical. Approximately ½ mile of fence adjacent to Kelso Creek in the Rudnick Common Allotment would be constructed by June 1, 2001. Several springs would be fenced in the Ord Mountain Allotment to restrict cattle access.

No Action (current management)

Under the no action livestock use would continue under current management for the 42 affected allotments. Lessees would continue to follow grazing management practices prescribed in AMPs, activity plans, CDCA Plan, and current grazing regulations. Exclusion or restriction of grazing use would be limited to existing permits or leases, activity plans, and biological opinions. Permitted use could be issued for 37,569 AUMs plus any ephemeral forage authorizations that are warranted. Construction of specific range improvements under the no action is not required, however, there are numerous range improvements that are currently planned, or at various stages of construction.

Alternative 1

Under this alternative cattle use of Cady Mountain, Crescent Peak, Hansen Common, Horsethief Springs, Pahrump Valley, Rattlesnake Canyon, Rudnick Common, Tunawee Common, and Walker Pass Allotments and sheep use of Rice Valley Allotment would continue as described in the no action (see Table 4). Those actions listed in the proposed action would continue for the remaining allotments. This alternative would authorize sheep or cattle use on allotments with exclusively desert tortoise non-critical habitat and limited other critical resources. This alternative would authorize grazing use of 310,993 acres of desert tortoise non-critical habitat that was either seasonally or totally excluded from grazing use under the proposed action. Management of these ten allotments would be similar to the no action alternative. Whitewater Canyon, Ford Dry Lake, Lacey-Cactus-McCloud, and Chemehuevi Allotments have large areas of desert tortoise non-critical habitat, but are not going to be grazed due to other resource factors.

The Rattlesnake Canyon Allotment would allow trailing of cattle between the desert pasture and mountain pasture through Rattlesnake Canyon. In the Rattlesnake Allotment, fencing of riparian vegetation in Rattlesnake Canyon would be completed and continuation with fencing of a portion of the allotment boundary would afford protection of a listed plant, riparian vegetation, and wilderness values. The installation of a cattle guard in Rattlesnake Canyon under the proposed action would not be built under alternative 1.

Table 1. Grazing Allotment Information

General Allotment Information									Terms of the Proposed Action				
Allotment Name	Allotment Acres		Active AUMs	Range Type 3/	Kind of Live-stock	Acres of Desert Tortoise Crit. Hab.	Acres of DT Non-Critical Habitat	Season of Use 4/	Type of Exclusion 5/	Acres of Excl.	Acres of DTCH	Acres of DT Non-Critical Habitat	Max. AUM 6/
	P. L. 1/	Total 2/											
Antelope Vly.	7,361	7,871	0	E	Sheep	0	1,048	NA	NA	0	0	0	NA
Boron	10,868	82,892	0	E	Sheep	0	10,868	NA	NA	0	0	0	NA
Bissell	5,596	48,889	0	E	Sheep	0	5,596	NA	NA	0	0	0	NA
Buckhorn Cyn.	12,364	27,053	NA	E	Sheep	12,364	7,634	NA	Total	19,998	12,364	7,634	NA
Cady Mtn. 9/	160,104	231,897	0 7/	E/P	Cattle	0	160,104	Y-L	Seasonal	88,320	0	88,320	NA
Cantil Com.	318,949	555,421	0	E	Sheep	91,930	318,949	NA	Total	102,397	91,930	10,467	NA
Chemehuevi	132,089	137,321	0	E	Cattle	91,863	45,458	NA	Total	137,321	91,863	45,458	NA
Clark Mtn.	97,560	119,952	1,498	E/P	Cattle	0	47,581	Y-L	NA	0	0	0	NA
Crescent Peak	6,719	6,870	0	E/P	Cattle	23	6,847	Y-L	Total	6,870	23	6,847	NA
Cronese Lake 9/	54,250	65,304	500	E/P	Cattle	30,080	34,170	Y-L	Seasonal	18,000	18,000	0	445
Ford Dry Lake	34,249	49,682	NA	E	Sheep	0	49,682	NA	Total	49,682	0	49,682	NA
Goldstone	11,061	11,061	NA	E	Sheep	11,061	0	NA	Total	11,061	11,061	0	NA
Gravel Hills	135,544	230,165	NA	E	Sheep	135,544	0	NA	Total	227,565	135,544	0	NA
Hansen Common 8/	34,848	72,102	354	E/P	Cattle & Sheep	0	3,549	12/1-9/30	Total	3,500	0	3,500	NA
Harper Lake 9/	21,602	26,314	600	E/P	Cattle	21,194	5,120	Y-L	Seasonal	16,482	16,482	0	564
Horsethief Spr. 9/	150,140	158,606	2,424	E/P	Cattle	0	50,965	Y-L	Seasonal	47,581	0	47,581	NA
Jean Lake	9,740	9,806	0	E/P	Cattle	7,809	101	Y-L	Total	9,806	9,809	0	NA
Johnson Valley	109,186	118,320	NA	E	Sheep	0	109,186	NA	NA	0	0	0	NA

General Allotment Information									Terms of the Proposed Action				
Allotment Name	Allotment Acres		Active AUMs	Range Type 3/	Kind of Live-stock	Acres of Desert Tortoise Crit. Hab.	Acres of DT Non-Critical Habitat	Season of Use 4/	Type of Exclusion 5/	Acres of Excl.	Acres of DTCH	Acres of DT Non-Critical Habitat	Max. AUM 6/
	P. L. 1/	Total 2/											
Kessler Springs	14,161	15,054	1,042	E/P	Cattle	11,901	2,616	Y-L	Total	14,517	11,901	2,616	NA
Lacey-Cactus-McCloud	421,172	421,172	4,873	P	Cattle	0	18,000	11/1-5/31	Total	18,000	0	18,000	NA
Lanfair Valley	90,611	116,268	0	E/P	Cattle	94,080	22,188	Y-L	Total	94,080	94,080	0	NA
Lazy Daisy 9/	325,686	332,886	3,192	E/P	Cattle	260,025	72,861	Y-L	Seasonal	108,020	108,020	0	1,300
Lava Mountain	20,902	20,902	0	E	Sheep	2,165	18,737	NA	Total	2,165	2,165	0	NA
Monolith-Cantil	37,771	47,553	0	E	Sheep	33,193	4,592	NA	Total	33,193	33,193	0	NA
Ord Mtn. 9/	136,188	154,848	3,632	E/P	Cattle	102,141	34,047	Y-L	Seasonal	54,000	54,000	0	2,064
Pahrump Vly. 9/	31,338	32,321	353	E/P	Cattle	0	31,338	3/1-5/15	Seasonal	7,680	0	7,680	NA
Pilot Knob	38,994	45,619	0	E	Cattle	37,857	7,762	NA	Total	45,619	37,857	7,762	NA
Piute Valley	20,219	23,874	0	E	Cattle	23,465	409	NA	Total	23,874	23,465	409	NA
Rattlesnake 9/	26,832	28,757	1,081	E/P	Cattle	0	12,800	Y-L	Seasonal	6,600	0	6,600	562
Rice Valley	74,740	85,565	NA	E	Sheep	0	85,565	NA	Total	85,565	0	85,565	NA
Round Mtn.	15,253	18,093	880	E/P	Cattle	0	0	12/1-3/31	Total	15,253	0	0	NA
Rudnick 9/ Common 8/	150,154	236,184	6,218	E/P	Cattle & Sheep	0	62,503	Y-L	Seasonal	31,000	0	31,000	NA
Shadow Mtn.	52,258	121,677	NA	E	Sheep	35,013	69,395	NA	Total	69,395	69,395	0	NA
Spangler Hills	57,695	69,141	0	E	Sheep	0	54,143	NA	NA	0	0	0	NA
Stoddard Mtn.	190,186	312,045	NA	E	Sheep	112,772	126,202	NA	Total	112,772	112,772	0	NA
Superior Valley	169,200	236,316	NA	E	Sheep	232,507	0	NA	Total	232,507	232,507	0	NA

General Allotment Information									Terms of the Proposed Action				
Allotment Name	**Allotment Acres**		**Active AUMs**	**Range Type 3/**	**Kind of Live-stock**	**Acres of Desert Tortoise Crit. Hab.**	**Acres of DT Non-Critical Habitat**	**Season of Use 4/**	**Type of Exclusion 5/**	**Acres of Excl.**	**Acres of DTCH**	**Acres of DT Non-Critical Habitat**	**Max. AUM 6/**
	P. L. 1/	**Total 2/**											
Tunawee Common 8/	51,729	55,931	1,540	E/P	Cattle & Sheep	0	1,800	2/16-5/31	Total	1,800	0	1,800	NA
Valley View	32,260	33,227	424	E/P	Cattle	5,779	26,281	Y-L	Total	5,779	5,799	0	NA
Valley Well	480	480	24	E/P	Horses	0	0	Y-L	NA	0	0	480	NA
Valley Wells 9/	223,120	237,127	3,808	E/P	Cattle	111,099	126,028	Y-L	Seasonal	88,879	88,879	0	1,692
Walker Pass 8/ 9/	88,158	96,974	3,368	E/P	Cattle	0	32,058	11/1-6/30	Seasonal	32,100	0	32,100	NA
Whitewater Cyn.	38,936	65,911	990	E/P	Cattle	0	39,307	Y-L	Total	65,911	0	39,307	NA
Total	3,620,273	4,767,451	36,801			1,463,865	1,705,490			1,887,292	1,261,109	492,808	6,627

1/ Acres of Public Land in the grazing allotment.
2/ The acres of private, State, BLM, and other ownerships that comprise the area of the grazing allotment.
3/ Those allotments classified as ephemeral (E) produce forage from primarily ephemeral (annual) plants. Those allotments classified as perennial (P) produce forage from perennial grass and shrubs. Those allotments with ephemeral and perennial (E/P) forage have a mixture of both range (forage) types.
4/ The period livestock typically graze forage on the allotment. Grazing use on some allotments is authorized to occur all "year-long" or Y-L. The grazing period of use does not apply (NA) to ephemeral allotments because grazing use occurs when forage is available.
5/ Under the terms of the settlement agreement cattle or sheep grazing is excluded from the allotment either seasonally (Seasonal) or potential and current grazing use ceases until the terms of the settlement have been met (Total). Seasonal exclusion occurs from March 1 to June 15, and again, from September 7 to November 7. Exclusion of livestock grazing is not applicable (NA) on some allotments.
6/ For those allotments specified under settlement agreement, grazing use or animal unit months (AUMs) has been restricted to this annual maximum available forage. Grazing use in Rattlesnake Canyon of Rattlesnake Canyon Allotment shall be reduced by June 1, 2001commensurate with the loss of area and forage in the proposed exclosure.
7/ The 1982 California Desert Conservation Area Plan Amendment process authorized 2,010 AUMs of perennial forage for the Cady Mountain Allotment.
8/ The "Total Exclusion" and "Seasonal Exclusion" in the Hansen, Rudnick Common, Walker Pass, and Tunawee Common Allotments are only for cattle grazing. Sheep producers would be authorized to graze sheep and/or to trail sheep along the stock driveway in these allotments.
9/ See attached map for proposed area of seasonal exclosure. The Rattlesnake Canyon Allotment would exclude cattle use in 6,600 acres of desert tortoise non-critical habitat and an unknown area of Rattlesnake Canyon.

Table 2. Current Grazing Management

Allotment Name	Managing Field Office	*Standard & Guidelines Information*		Selective Management Category (M, I & C)	Allotment Management Plan (AMP) Completed (Yes or No)	ACEC Within or Adjacent to Exclusion	Wilderness Within or Adjacent to Exclusion	Range Improvements Needed to Implement
		Determination Completed (Yes or No)	Standards 1/ (Met, Not Met, or Unknown)					
Antelope Valley	Ridgecrest	No	Unknown	C	No	No	No	No
Boron	Ridgecrest	No	Unknown	C	No	No	No	No
Bissell	Ridgecrest	No	Unknown	C	No	No	No	No
Buckhorn Canyon	Barstow	No	Unknown	C	No	No	No	No
Cady Mountain	Barstow	No	Unknown	I	Yes	Yes	No	Yes
Cantil Common	Ridgecrest	No	Unknown	M	Yes	Yes	Yes	No
Chemehuevi	Needles	Yes	Met	I	No	Yes	Yes	No
Crescent Peak	Needles	Yes	Met	C	Yes	No	No	No
Cronese Lake	Barstow	Yes	Met	I	Yes	Yes	No	No
Ford Dry Lake	Palm Springs	Yes	Met	M	Yes	Yes	Yes	No
Goldstone	Barstow	No	Unknown	C	No	No	No	No
Gravel Hills	Barstow	No	Unknown	C	Yes	Yes	Yes	No
Hansen Common	Ridgecrest	No	Unknown	M	Yes	Yes	No	No
Harper Lake	Barstow	Yes	Not Met	I	Yes	Yes	Yes	No
Horsethief Springs	Barstow	Yes	Met	M	Yes	Yes	Yes	No
Jean Lake	Barstow	Yes	Met	C	Yes	Yes	No	No
Johnson Valley	Barstow	No	Unknown	M	No	Yes	No	No
Kessler Springs	Barstow	Yes	Met	C	Yes	Yes	No	No
Lacey-Cactus-McCloud	Ridgecrest	No	Unknown	I	Yes	Yes	No	No
Lanfair Valley	Needles	Yes	Met	I	Yes	No	No	No
Lazy Daisy	Needles	Yes	Met	M	No	No	Yes	No

Allotment Name	Managing Field Office	*Standard & Guidelines Information*		Selective Management Category (M, I & C)	Allotment Management Plan (AMP) Completed (Yes or No)	ACEC Within or Adjacent to Exclusion	Wilderness Within or Adjacent to Exclusion	Range Improvements Needed to Implement
		Determination Completed (Yes or No)	Standards 1/ (Met, Not Met, or Unknown)					
Lava Mountain	Ridgecrest	No	Unknown	M	No	Yes	Yes	No
Monolith-Cantil	Ridgecrest	No	Unknown	M	No	Yes	No	No
Ord Mountain	Barstow	Yes	Not Met	I	Yes	Yes	Yes	Yes
Pahrump Valley	Barstow	No	Unknown	M	No	No	Yes	No
Pilot Knob	Ridgecrest	Yes	Met	I	No	No	Yes	No
Piute Valley	Needles	Yes	Met	M	Yes	No	No	No
Rattlesnake	Barstow	Yes	Not Met	I	No	No	Yes	Yes
Rice Valley	Palm Springs	Yes	Met	M	Yes	No	Yes	No
Round Mountain	Barstow	No	Unknown	M	No	Yes	No	No
Rudnick Common	Ridgecrest	No	Unknown	I	Yes	Yes	No	No
Shadow Mountain	Barstow	No	Unknown	M	No	No	No	No
Spangler Hills	Ridgecrest	No	Unknown	C	No	Yes	No	No
Stoddard Mountain	Barstow	No	Unknown	M	Yes	Yes	No	No
Superior Valley	Barstow	No	Unknown	C	No	Yes	No	No
Tunawee Common	Ridgecrest	No	Unknown	I	No	Yes	No	No
Valley View	Needles	Yes	Met	C	Yes	Yes	No	No
Valley Well	Barstow	No	Unknown	C	No	No	No	No
Valley Wells	Needles	Yes	Met	I	Yes	Yes	Yes	No
Walker Pass	Ridgecrest	No	Unknown	I	Yes	Yes	Yes	No
Whitewater Canyon	Palm Springs	Yes	Not Met	M	Yes	Yes	Yes	No

1/ The current National “fallback” standards were used to assess resource conditions.

Table 3. Range Improvements Necessary to Implement the Proposed Action			
Allotment Name/ Project Name	***Location*** Township/Range/ Section	***Comments***	***Mitigation Description***
Rattlesnake Canyon Southeast Rattlesnake Boundary Fence	T. 2 N., R. 3 E., Sections 12 & 14	3½ miles, 4-strand, smooth top wire, project approximately ¼ complete.	Prevent unauthorized cattle drift off of allotment into wilderness and elsewhere.
Rattlesnake Canyon Rattlesnake Canyon Cattleguard #1	T. 2 N., R. 3 E., Section 35	Install fence from cattleguard to canyon walls.	Stop cattle trailing through Rattlesnake Canyon.
Rattlesnake Canyon Rattlesnake Canyon Cattleguard #2	T. 3 N., R. 3 E., Section 29	Install fence from cattleguard to canyon walls.	Stop cattle trailing through Rattlesnake Canyon.
Ord Mountain Water Control Fence - Aztec Spring	T. 7 N., R. 1 E., Section 12	Construct approximately one-hectare outer fence and construct smaller inner fence around water source.	Fence water source to improve cattle distribution and forage conditions.
Ord Mountain Water Control Fence - Badger Spring	T. 6 N., R. 1 E., Section 31	Construct approximately one-hectare outer fence and construct smaller inner fence around water source.	Fence water source to improve cattle distribution and forage conditions.
Ord Mountain Water Control Fence - Willow Spring	T. 7 N., R. 2 E., Section 18	Construct approximately one-hectare outer fence and construct smaller inner fence around water source.	Fence water source to improve cattle distribution and forage conditions.
Ord Mountain Water Control Fence - Kane Spring	T. 8 N., R. 3 E., Section 31	Construct one-hectare outer fence enclosing trough(s) and construct smaller inner fence around source.	Fence water source to improve cattle distribution and forage conditions.
Ord Mountain Water Control Fence - Goat Spring	T. 7 N., R. 1 E., Section 30	Construct one-hectare outer fence enclosing trough(s).	Fence water source to improve cattle distribution and forage conditions.
Ord Mountain Water Control Fence - Quill Spring	T. 6 N., R. 1 E., Section 4	Construct one-hectare outer fence enclosing trough(s).	Fence water source to improve cattle distribution and forage conditions.
Cady Mountain Mojave River Gap Fence	T. 11 N., R. 5 E., Section 17 & 18	Construct approx. ½ mile of gap fence tied into the existing riparian exclosure fence and railroad fence.	Prevent cattle from accessing the Mojave River at Afton Canyon as a water source. Develop new water source.
Cady Mountain 9-Mile Waterhole Reconstruction.	T. 11 N.,R. 5 E., Section 32	Re-construct an old waterhole located along side the Mojave River.	Alternative stockwater source for the Mojave River.
Rudnick Common Kelso Creek Riparian Fence		Construct one-half mile of riparian/buffer exclosure fence along Kelso Creek	To exclude livestock from private and public land to protect SW Willow Flycatcher habitat.

Table 4 Comparison of Proposed Action and Alternative 1

Allotment Name	Exclusion 1/		Acres of Exclusion		Acres of DT Critical Habitat		Acres of DT Non-Critical Habitat		Maximum AUMs 2/	
	Proposed Action	Alt. 1	Proposed Action	Alternative 1	Proposed Action	Alternative 1	Proposed Action	Alternative 1	Proposed Action	Alternative 1
Cady Mountain 3/	Seasonal	None	88,320	0	0	0	88,320	0	NA	NA
Crescent Peak	Total	None	6,870	0	23	0	6,847	0	NA	NA
Hansen Common 4/	Total	None	3,500	0	0	0	3,500	0	NA	NA
Horsethief Springs	Seasonal	None	47,581	0	0	0	47,581	0	NA	NA
Pahrump Valley	Seasonal	None	7,680	0	0	0	7,680	0	NA	NA
Rattlesnake	Seasonal	None	6,600	0	0	0	6,600+	0	540	1,049
Rice Valley	Total	None	85,565	0	0	0	85,565	0	NA	NA
Rudnick Common 4/	Seasonal	None	31,000	0	0	0	31,000	0	NA	NA
Tunawee Common 4/	Total	None	1,800	0	0	0	1,800	0	NA	NA
Walker Pass 4/	Seasonal	None	32,100	0	0	0	32,100	0	NA	NA

1/ Under the terms of the settlement agreement cattle or sheep grazing is excluded from the allotment either seasonally (Seasonal) or potential and current grazing use ceases until the terms of the settlement have been met (Total) (see Table 1). Seasonal exclusion occurs from March 1 to June 15, and again, from September 7 to November 7. Exclusion of livestock grazing is not applicable (NA) on some allotments.

2/ The area excluded from grazing use and the resulting reduction in grazing use in Rattlesnake Canyon within the Rattlesnake Canyon Allotment would not occur in Alternative 1. This action does not apply (NA) to all allotments except Rattlesnake Canyon.

3/ The 1982 California Desert Conservation Area Plan Amendment process authorized 2,010 AUMs of perennial forage for the Cady Mountain Allotment.

4/ The "Total Exclusion" and "Seasonal Exclusion" in the Hansen, Rudnick Common, Walker Pass, and Tunawee Common Allotments are only for cattle grazing. Sheep producers can continue to be authorized to graze sheep and/or to trail sheep along the stock driveway in these allotments.

CHAPTER 3: ENVIRONMENTAL ANALYSIS

LIVESTOCK GRAZING

The time frame for the analysis described in this chapter is up to the date a biological opinion is issued from the FWS, covering grazing activities in accordance with the Environmental Impact Statement for the Proposed California Desert Conservation Area Plan Amendments for The Northern and Eastern Mojave Planning Area, or the Northern and Eastern Colorado Coordinated Management Plan and Environmental Impact Statement, or on January 31, 2002 whichever is later.

In those allotments where livestock would be seasonally or totally excluded during this interim period, some areas such as places where livestock have concentrated (water sources, fence lines etc.) could show a change, as discussed in the Vegetation Section of this document. These changes are not expected to be substantial, since desert vegetation in upland sites would take longer than the interim period to show change in trend in range condition. Riparian areas could potentially show change in the short term, however, as discussed in the Wetland/Riparian Section. Contributing factors to the amount or type of change which could occur within the allotments during the interim period could include weather cycles, drought, fire, flood, insect infestation or disease.

In all alternatives compliance inspections and monitoring would be completed on the allotments to identify if adverse impacts from livestock grazing are occurring, and determine what management actions need to be implemented. These studies would include rangeland health assessments, forage production studies, and other monitoring studies. In some cases the studies have already been completed and recommendations finalized. These actions are in various stages of implementation on some allotments.

A. Affected Environment

Grazing allotments are defined geographical areas (see Livestock Grazing Element, CDCA Plan 1980, (1999)). Forage for cattle, sheep, and horses within the allotments is allocated as ephemeral (annual plants) or perennial (perennial grass or shrubs) or both ephemeral and perennial range type classifications because rangeland forage in the California desert can vary dramatically. The CDCA Plan prescribes the area and the sustainable amount of perennial forage by animal unit months (AUMs) for each perennial allotment (Table 6-Part B, CDCA Plan, 1980). Past and current grazing management is based on development and implementation of programs to attain resource objectives. Refer to Table 1 and 2 for allotment specific information about current management on the 42 allotments and see Appendix A for maps of specific allotments.

Sheep Allotments

Most sheep allotments are found on large flats or low rolling hills where ephemeral forage can be abundant during good years. Sheep are moved with the assistance of a herder through allotments. The herder remains with the sheep at all times. Grazing by this herding method, allows herders the ability to control and insure proper distribution. To maximize flexibility all sheep producers use portable and temporary facilities such as portable troughs. As sheep are herded through allotments, temporary water facilities are moved as needed. See Appendix B for the FWS Biological Opinion Terms and Conditions for Sheep Allotments.

Antelope Valley Allotment is an ephemeral allotment consisting of 7,871 acres comprised of 510 acres of private land and 7,361 acres of BLM lands. This allotment has 1,048 acres of non-critical desert tortoise habitat. In years of adequate ephemeral forage production, sheep grazing is authorized. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment. See Table 1.

The Boron Allotment is an ephemeral allotment consisting of 82,892 acres comprised of 72,024 acres of private land and 10,868 acres of BLM lands. This allotment has 10, 868 acres of non-critical desert tortoise habitat. In years of adequate ephemeral forage production, sheep grazing is authorized. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment. See Table 1.

The Bissell Allotment is an ephemeral allotment consisting of 48,889 acres comprised of 43,293 acres of private land and 5,596 acres of BLM lands. This allotment has 5,596 acres of non-critical desert tortoise habitat. In years of adequate ephemeral forage production, sheep grazing is authorized. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment. See Table 1.

The Buckhorn Canyon Allotment is an ephemeral allotment consisting of 27,053 acres comprised of 14,689 acres of private land and 12,364 acres of BLM lands. This allotment has 7,634 acres of non-critical desert tortoise habitat and 12,364 acres of critical desert tortoise habitat. In years of adequate ephemeral forage production, sheep grazing is authorized. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment. See Table 1.

The Cantil Common Allotment is an ephemeral allotment consisting of 555,421 acres comprised of 236,472 acres of private land and 318,949 acres of BLM lands. This allotment has 240,913 acres of non-critical desert tortoise habitat, and 78,035 acres of desert tortoise critical habitat. In years of adequate ephemeral forage production, sheep grazing is authorized in non-critical habitat. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment. See Table 1.

The Ford Dry Lake Allotment is an ephemeral allotment consisting of 49,682 acres, comprised of

15,433 acres of private land and 34,249 acres of BLM lands. This allotment contains 49,042 acres of non-critical and 640 acres of critical desert tortoise habitat. Grazing is authorized in both critical and non-critical habitat with specific terms and conditions outlined in the Appendix XX. The allotment is grazed infrequently due to long periods between adequate ephemeral forage production. This allotment has been grazed twice within the last 10 years

The Goldstone Allotment is an ephemeral allotment consisting of 11,061 acres of BLM lands. This allotment has 11,061 acres of critical desert tortoise habitat. This allotment is currently an inactive, vacant ephemeral sheep allotment. The 1991 Biological Opinion and extensions disallowed ephemeral sheep grazing in critical desert tortoise habitat. See Table 1.

The Gravel Hills Allotment is an ephemeral allotment consisting of 230,165 acres comprised of 94,621 acres of private land and 135,544 acres of BLM lands. This allotment has 0 acres of non-critical desert tortoise habitat and 135,544 acres of critical desert tortoise habitat. This allotment is currently an inactive, vacant ephemeral sheep allotment. The 1991 Biological Opinion and extensions disallowed ephemeral sheep grazing in critical desert tortoise habitat. See Table 1.

The Johnson Valley Allotment is an ephemeral allotment consisting of 118,320 acres comprised of 9,134 acres of private land and 109,186 acres of BLM lands. This allotment has 118,320 acres of non-critical desert tortoise habitat and 0 acres of critical desert tortoise habitat. In years of adequate ephemeral forage production, sheep grazing is authorized. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment. See Table 1.

The Lava Mountain Allotment is an ephemeral allotment consisting of 20,902 acres of BLM lands. This allotment has 18,757 acres of non-critical and 2,145 acres of critical desert tortoise habitat. In years of adequate ephemeral forage production, sheep grazing is authorized in both non-critical and a small portion of critical habitat. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment. See Table 1.

The Monolith-Cantil Allotment is an ephemeral allotment consisting of 47,553 acres comprised of 9,782 acres of private land and 37,771 acres of BLM lands. This allotment has 7,939 acres of non-critical and 29,846 acres of critical desert tortoise habitat. In years of adequate ephemeral forage production, sheep grazing is authorized in non-critical habitat. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment. See Table 1.

The Rice Valley Allotment is an ephemeral allotment consisting of 85,565 acres, comprised of 10,825 acres of private land and 74,740 acres of BLM Land The allotment contains 85,565 acres of non-critical habitat. California and just south of Rice on Highway 62. The lessee grazes alfalfa fields on private land near the allotment during the winter. When ephemeral forage is available, sheep are

authorized to graze on the allotment. After grazing the allotment, the sheep are transported to summer grazing areas in Idaho between May 30 and June 15.

The Shadow Mountain Allotment is an ephemeral allotment consisting of 121,677 acres comprised of 69,419 acres of private land and 52,258 acres of BLM lands. This allotment has 86,664 acres of non-critical desert tortoise habitat and 35,013 acres of critical desert tortoise habitat. In years of adequate ephemeral forage production, sheep grazing is authorized. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment. See Table 1.

The Spangler Hills Allotment is an ephemeral allotment consisting of 69,141 acres comprised of 11,446 acres of private land and 57,695 acres of BLM lands. This allotment has 54,143 acres of non-critical desert tortoise habitat. In years of adequate ephemeral forage production, sheep grazing is authorized. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment. See Table 1.

The Stoddard Mountain Allotment is an ephemeral allotment consisting of 312,045 acres comprised of 121,859 acres of private land and 190,186 acres of BLM lands. This allotment has 126,202 acres of non-critical desert tortoise habitat and 112,772 acres of critical desert tortoise habitat. In years of adequate ephemeral forage production, sheep grazing is authorized. Ephemeral forage is found on large flats. Water is hauled to temporary locations and can be moved as sheep are herded through the allotment. See Table 1.

The Superior Valley Allotment is an ephemeral allotment consisting of 236, 316 acres comprised of 67, 116 acres of private land and 169,200 acres of BLM lands. This allotment has 0 acres of non-critical desert tortoise habitat and 169,200 acres of critical desert tortoise habitat. This allotment is currently an inactive, vacant ephemeral sheep allotment. The 1991 Biological Opinion and extensions disallowed ephemeral sheep grazing in critical desert tortoise habitat. See Table 1.

In Hansen Common, Rudnick Common, Walker Pass Common, and Tunawee Common Allotments as well as authorizing cattle grazing can also authorize sheep grazing and/or trailing on the stock driveway. In areas of the allotment where ephemeral sheep grazing is authorized, ephemeral cattle grazing is not authorized. Since sheep grazing occurs on these allotment during ephemeral years only, these allotments are described in detail in the cattle section of the Affected Environment.

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Cattle Allotments

Chemehuevi, Pilot Knob, and Piute Valley Allotments, all ephemeral allotments, have not authorized

ephemeral cattle grazing use for many years. Chemehuevi is a vacant allotment but Pilot Knob and Piute Valley have current grazing leases. Grazing on the BLM portion of the Piute Valley Allotment has not been authorized for many years due to lack of adequate ephemeral production, and because cattle are to be removed from the portion of desert tortoise habitat east of the power line road, as described in the terms and conditions of the current biological opinion. The National Park Service (NPS) administers the western portion of Piute Valley Allotment and can authorize cattle use while the eastern portion is administered by the BLM and cattle use is precluded.

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The Hansen Common, Rudnick Common, Tunawee Common, and Walker Pass Common allotments all have an ephemeral and perennial forage component, with different permitted AUMs, season of use etc. For allotment specific data see Table 1. Sheep grazing and trailing can be authorized in these allotments when ephemeral forage production is sufficient. For maps see Appendix A, maps 3, 10, 11 and 14.

The Hansen Common Allotment consists of 72,102 acres comprised of 37,254 private land and 34,848 acres of BLM lands. Approximately 3,549 acres of the allotment is non-critical habitat for desert tortoise. This allotment does not have a grazing system based on pasture rotation. Most grazing occurs on private land with cattle drifting onto BLM land at various periods, depending on available forage and water. Cattle use is authorized on BLM land for 10 months. Ephemeral forage on this allotment is located in areas typically grazed by sheep rather than cattle when adequate ephemeral forage production occurs. See Table 1.

The Tunawee Common Allotment consists of 55,931 acres comprised of 4,202 private land and 51,729 acres of BLM land. Approximately 1,800 acres of the allotment is non-critical habitat for desert tortoise. The allotment has not been grazed by cattle since 1993. From 1994 to the present, the allotment has been grazed by sheep. See Table 1.

The Lacey-Cactus-McCloud allotment utilizes a rotational grazing system comprised of pastures that utilize fences and topographic barriers as boundaries. Several of the pastures located on the China Lake Naval Air Weapons Station (NAWS) have been closed to grazing for many years. In addition, NAWS canceled grazing use on their portion of the allotment in June 2000. There is approximately 18,025 acres of non-critical habitat for desert habitat. See Table 1.

The Walker Pass Common Allotment consists of 96,974 acres, comprised of 8,816 acres of private land and 88,158 acres of BLM land. Approximately 32,058 acres of the allotment is non-critical habitat for desert tortoise. Three lessees graze cattle on the Walker Pass Common Allotment. The lessees can graze on the allotment for an 8 month period. The southern use area consists of 14,791 acres, comprised of 847 acres of private land and 13,941 acres of BLM land. There is 6,865 acres of non-critical habitat for desert tortoise. The lessee of the southern use area (lessee 1) uses water

availability to promote proper distribution and movement of cattle in the use area. Lessee 1 typically removes cattle from the allotment by February 28. See Table 1.

The middle use area consists of 48,163 acres, comprised of 5,626 acres of private land, 47 acres of state land, and 42,702 acres of BLM land. There is 6,387 acres of non-critical habitat for desert tortoise. The lessee of the middle use area (lessee 2) uses fences, and topographic features to distribute cattle in this use area. Lessee 2 typically removes cattle from the allotment around June 30. When ephemeral forage is sufficient the lessee typically make use of the eastern portion of the allotment where the ephemeral forage is most productive. See Table 1.

The northern use area consists of 33,635 acres, comprised of 950 acres of private land, 385 acres of state land, and 32,300 acres of BLM land. There is 15,885 acres of non-critical habitat for desert tortoise. The lessee of the northern use area (lessee 3) typically removes cattle from the allotment around June 30. When ephemeral forage is sufficient the lessee typically make use of the eastern portion of the allotment where the ephemeral forage is most productive. See Table 1.

The Rudnick Common Allotment consists of 236,184 acres, comprised of 86,030 acres of private land and 150, 154 acres of BLM land. There is 62,503 acres of non-critical habitat for desert tortoise. There are two lessees in the Rudnick Common Allotment. One lessee grazes only in the Cane Canyon and Pinyon Well pastures. These pastures have no desert tortoise habitat and the lessee is not affected by the proposed action or alternatives. The second lessee grazes in the rest of the allotment, which has 62,503 acres of non-critical habitat for desert tortoise, and is affected by the proposed action and alternatives. The second lessee grazes season long. This allotment utilizes a rotational grazing system comprised of pastures that utilize fences and topographic barriers as boundaries. Choice, timing, and duration of use for each pasture is dependent on several factors including plant phenology, climatic conditions, and past use. A few of the pasture fences including the Dove Springs and San Antonio fences are routinely damaged and cut presumably by off highway vehicle users. Maintenance and repair of fence is difficult because portions of the fence are located in rugged terrain. See Table 1.

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Clark Mountain, Cronese Lake, Harper Lake, Horsethief Springs, Lazy Daisy, Ord Mountain, Pahrump Valley, Rattlesnake Canyon, Valley Well, and Valley Wells Allotments are active allotments found in the western and eastern portion of the Mojave Desert of California. Lessees for Clark Mountain, Cronese Lake, Horsethief Springs, Lazy Daisy, Ord Mountain, Valley View, and Valley Wells Allotments currently request cattle grazing use below permitted use level because of poor forage conditions or for economic reasons. Harper Lake, Pahrump Valley, Rattlesnake Canyon and Valley Well Allotments are utilizing forage near permitted use levels for the allotment.

Grazing use on the Clark Mountain Allotment is divided into three main areas; Ivanpah Valley, South West (west of Keany Pass), and Mesquite Valley. These areas are not completely separated by

fencing. Most grazing use is near Mesquite Lake area along the western edge of the allotment, through the Colosseum Mine area. There are natural sources of water within the allotment administered by the NPS. In the past water was sometimes hauled to a site near Mesquite Pass in wetter years. A portion of the Clark Mountain Herd Management Area, designated for the management of 44 burros, overlaps the allotment. Wild burros are present on the allotment especially in the Ivanpah Valley area north and west of I-15, and they have free access to natural and developed water sources. The south eastern portion of the allotment in Ivanpah Valley also overlaps desert tortoise non critical habitat or 30% of the total allotment acreage (see Table 1).

The Valley Well Allotment is a very small allotment (480 acres) located approximately 7 miles south of Barstow, adjacent to State Highway 247. This small allotment has been grazed by the lessee's domestic horses 5 out of the last 10 years. This allotment is located outside critical habitat for the desert tortoise.

The lessees of the Lazy Daisy Allotment have voluntarily reduced cattle numbers for years due to poor forage conditions. Cattle can graze all year-long on the 325,686-acre allotment and 78 percent of the allotment is in desert tortoise critical habitat (see Table 1 and Map 6). Cattle do not often graze in the higher elevations on the south and west side of the allotment outside desert tortoise critical habitat because of the rough topography and lack of water. Since there are no natural barriers or fenced pastures, the allotment is operated as one unit. Cattle distribute throughout the allotment depending on available water, temperature, and forage conditions. Except for trailing back and forth across Ward Valley to Homer Wash for palatable shrubs, cattle tend to graze the northwest and south east sides of the allotment in spring and move closer to the mountain ranges as forage starts to dry. Most existing natural water sources and active wells on the allotment are located within critical habitat and have been incorporated into corrals for capturing cattle. The lessees gather and process cattle a few at a time by trapping them in corrals or facilities set up around the water sources. There are several proposed range facilities slated for construction to enhance cattle distribution.

Cattle graze year-long on the Horsethief Springs Allotment. The allotment is 158,606 acres in size of which 50,965 acres is desert tortoise non-critical habitat. The allotment has natural barriers and fencing that divide the allotment into four pastures. The east side, the lower elevation, the west side or California Valley (which is mostly ephemeral rangeland), and the Kingston Mountain are the four pastures of the allotment. The northern portion of the California Valley pasture and northern portions of the other three pastures overlap desert tortoise non-critical habitat which covers about 30 percent of the allotment (see Table 1 and Map 4). The period of use and amount of grazing use of the pastures varies with rainfall and temperature. Currently, most grazing occurs outside tortoise habitat on the east side and lower elevation pastures. Water is supplied by pipelines or natural springs located both within and outside of non critical habitat. The lessee maintains range improvements and has improved some improvements so cattle evenly distribute throughout the pastures as prescribed in the AMP.

Cattle graze year-long on the Valley Wells Allotment. The allotment is 237,127 acres in size of which

111,099 acres is desert tortoise critical habitat and 126,028 acres (53%) is tortoise non-critical habitat (see Table 1 and Map 11). The allotment is relatively flat in the middle with hills or mountains on the western and eastern flanks. This type of topography affords cattle access to most of the allotment. The enormity of the allotment lends itself to specific areas of cattle and burro use. Numerous water troughs adjacent to a pipeline running generally north and south through the middle of Shadow Valley supplies supply water to cattle. Cattle graze hills to the west of Shadow Valley because of water sources near I-15. Some water troughs are enclosed with a corral used to handled cattle, and these troughs and corrals are located within tortoise critical habitat. There are natural springs that supply water to the western and eastern sides of the allotment. Those on the eastern side are located within a portion of the Mojave National Preserve. Wild burros, as discussed in Wild Horses and Burros section, are present on the allotment and their population is in excess of the herd management area's appropriate management level and they have free access to natural and developed water sources.

The 32,321-acre Pahrump Valley Allotment is located just west of the California and Nevada state line, east of the Nopah Mountain Range. Approximately 60 percent of the allotment is within designated wilderness and 31,338 acres of the allotment is within desert tortoise non-critical habitat (see Table 1 and Map 7). The season of cattle use is March 1st to May 1st. There is currently one inactive well in the northern portion of the allotment and very little cattle use occurs in this portion of the allotment. The majority of the cattle use the southern portion of the allotment adjacent to three earthen reservoirs. See Appendix A, Map 8.

The Cady Mountain Allotment is located between I-15 and I-40 in the western Mojave Desert and the allotment comprises 231,897 acres (see Table 1 and Map 1). The period for grazing is year-long. The Mojave River runs through the extreme northern portion of the allotment which contains extensive areas of riparian habitat. The allotment currently has two active and two inactive deep wells. The majority of grazing use occurs in the western and central portions of the allotment in association with the active wells, and in the Afton Canyon area. The allotment is within 160,104 acres of desert tortoise non-critical habitat. See Appendix A, Map 1.

The Rattlesnake Canyon Allotment is located at the base of and within the Bighorn Mountain Range. The season for cattle use is year-long. The allotment is topographically divided into the desert pasture, Rattlesnake Canyon, and the mountain pasture. The allotment contains seven developed springs, four located in the desert pasture and the remaining three located in the mountain pasture. Cattle use is primarily seasonal, with most of the grazing use in the winter and spring occurs in the desert pasture while summer and fall grazing use occurs in the mountain pasture. Rattlesnake Canyon is primarily used to trail cattle between the desert and mountain pastures. The desert pasture has 12,800 acres of desert tortoise non-critical habitat, where desert tortoise densities are probably low. Rattlesnake Canyon within the allotment is a wide, five mile long canyon with steep walls and a rocky to sandy bottom. The canyon stretches from the desert floor and rises in elevation to over 5,000 feet. The lower portion of the Rattlesnake Canyon may support low densities of desert tortoises, however above 4,000 feet it is unlikely to support tortoises. No other listed species are known to be present in the canyon. See

Appendix A, Map 9.

The Ord Mountain Allotment is located south of I-40, approximately 8 miles southeast of Barstow. Cattle graze the allotment all year-long and the allotment is 154,848 acres in size of which 102,141 acres is in desert tortoise critical habitat and 34,047 acres is in desert tortoise non-critical habitat (see Table 1 and Map 6). The allotment contains seven developed springs and two wells on public land. Most of the grazing use on public land occurs in the western portion of the allotment where most of the developed water is located. See Appendix A, Map 7.

The Harper Lake Allotment is located 15 miles northwest of Barstow. Cattle use occurs all year-long. There is one well on public land. Approximately 65 percent of this allotment is within desert tortoise critical habitat and in the northern pasture while the remaining 35 percent of desert tortoise non-critical habitat is located in the southern pasture (see Table 1 and Map 3). Due to the lack of developed water, In the past, there has been a lack of water in the northern pasture and cattle have drifted off the allotment. The recent development of stock water on private land in the northern pasture has more evenly distributed grazing use. Until development of water in the northern pasture, past grazing use has been confined to the southern pasture. See Appendix A, Map 4.

The Cronese Lake Allotment is located approximately 30 miles northeast of Barstow and just north of I-15. The season of use is year-long. Water is supplied by one well on public land. Approximately 55 percent of the allotment is within desert tortoise critical habitat (see Table 1 and Map 2). See Appendix A, Map 2.

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Crescent Peak, Jean Lake, Lanfair Valley, Round Mountain, and Whitewater Canyon Allotments are either vacant or inactive allotments. Crescent Peak and Jean Lake Allotments have been vacant for many years. The respective Nevada-BLM portion of the Crescent Peak Allotment was cancelled in 1994.

The Kessler Springs and Lanfair Valley Allotments were recently purchased by National Parks Foundation. As per 1999 Grazing Amendment to the CDCA Plan, the BLM portion of the Lanfair Valley Allotment was terminated after the NPS canceled their portion of the Lanfair Allotment in the Mojave National Preserve. Grazing use would not longer occur on 94,080 acres of desert tortoise critical habitat and 22,188 acres of tortoise non-critical habitat in the Lanfair Valley Allotment (see Table 1). That portion of the Kessler Springs Allotment within the Mojave National Preserve was terminated and that portion of the Kessler Springs Allotment administered by the BLM can continue cattle use.

The BLM portion of Kessler Springs remains active, and 82 percent of the acreage is within desert tortoise critical habitat except for an area west of Ivanpah Lake along the eastern slope of the Ivanpah

Mountain (see Table 1 Map 10). Cattle are usually distributed throughout the allotment, especially when water is available in charcos or dugouts along the edge of the lake bed. The main forage is the productive stands of grass on the east side of the allotment. Current use of the allotment is year-long. Due to lack of fences the Kessler Springs Allotment runs in common with the adjacent Valley View Allotment. Cattle from Kessler Springs Allotment may also utilize water sources on Valley View.

B. Environmental Consequences (Livestock Grazing)

Proposed Action

Sheep Allotments

The proposed action would have no impact to sheep grazing or trailing through Hansen Common, Rudnick Common, Walker Pass, and Tunawee Common Allotments. The proposed action would have no impact on sheep grazing activities within any of the allotments except for Ford Dry Lake and Rice Valley Allotments. Neither Ford Dry Lake or Rice Valley Allotment are actively used as much as the western Mojave Desert sheep allotments. There is a low probability that either allotment would be needed this spring.

Cattle Allotments

Under the proposed action, cattle use of ephemeral forage in Chemehuevi, Pilot Knob, and Piute Valley Allotments would not occur. There would be no impact to grazing operations.

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The impacts of the interim seasonal and total exclusion vary considerably from one cattle operation to the next. In some allotments total and seasonal exclusions are located in areas not typically grazed by cattle. In other allotments, exclusions are located in areas grazed only during productive ephemeral seasons. In the remaining allotments exclusions are located in areas critical to the current livestock operation. Lessees with areas of seasonal or total exclusion would incur additional workload to maintain cattle out of the excluded area and increased management efforts must be employed to restrict livestock from proposed exclusion. See attached cattle allotment maps in Appendix A for the proposed seasonal exclusions for Rudnick Common, Walker Pass Common, Hansen Common, Tunawee Common, Pahrump Valley, Harper Lake, Ord Mountain, Cady Mountain, Cronese Lake, Rattlesnake Canyon, Horsethief Springs, Valley Wells, and Lazy Daisy Allotments and total exclusion for Valley View and Kessler Springs Allotments.

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The interim total exclusion in the Hansen Common allotment is 3,500 acres or 5% of the allotment. The lessee of the allotment does not typically graze cattle in the interim total exclusion area of the allotment. There is potential for cattle to drift into the total exclusion. Cattle movement into the closed area can be averted by removing all or a portion of the herd. If cattle do not remain out of the interim total

exclusion area they would have to be removed from the allotment

The interim total exclusion in the Tunawee Common allotment is 1,800 acres or 3% of the allotment. The allotment would not be impacted by the proposed action because cattle do not graze or drift into the area being excluded.

The interim total exclusion in the Lacey-Cactus-McCloud allotment is 18,000 acres or 4% of the allotment. The allotment would not be impacted by the proposed action. The area excluded from grazing is located on NAWS, and grazing was canceled from that part of the allotment in June 2000.

The interim seasonal exclusion in the Walker Pass Common allotment is 32,100 acres or 33% of the allotment here are no topographic features or fences to keep cattle from walking into the area excluded from cattle use.. As in most allotments, cattle will be automatically drawn to succulent ephemeral forage areas during years when moderate to high forage production occurs. During this interim period when substantial ephemeral forage is produced, cattle movement into the excluded area can be averted by removing all or a portion of the herd or using a range rider to move cattle away from the closed area Lessee 1 would have very little impact from the interim seasonal closure because they routinely remove their cattle from the allotment by February 28. . If cattle do not remain out of the interim seasonal exclusion area they would have to be removed from the allotment. Lessee 2 would have to remove 160 cattle for a 3¾-month period. Lessee 3 would have to remove 153 cattle for a 3¾-month period.

The interim seasonal exclusion in the Rudnick Common allotment is 31,000 acres or 13 % of the allotment. The interim seasonal exclusion area encompasses the entire dove springs pasture. The fence around the pasture is routinely vandalized thereby, potentially jeopardizing the seasonal exclusion. There is potential for cattle to drift into the seasonal exclusion through cuts in the fence. Cattle movement into the closed area can be averted by removing all or a portion of the herd. If cattle do not remain out of the interim seasonal exclusion area they would have to be removed from the allotment. The lessee would have to remove 225 cattle for a 5½ month period.

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Under all alternatives cattle use would not be impacted on the Clark Mountain Allotment.

Under the proposed action, the Lazy Daisy Allotment would receive a 66 percent temporary reduction in forage use and a temporary 33 percent reduction in area of grazing use, or 108,000 acres(see Table 1 and Map 5). Because of the lack of fencing and natural barriers in the Lazy Daisy Allotment, it would be difficult to continue the current management situation while implementing the seasonal exclusions and reduction of cattle forage use. During the spring seasonal exclusion period, if ephemeral production is high, cattle would drift into the southeast and the northwest portions of the allotment which are within desert tortoise critical habitat and the excluded areas. Under favorable ephemeral conditions cattle may go for several days without water and it would be difficult to restrict them from drifting into any

particular excluded area. During the fall seasonal exclusion period, the forage may show more vigor especially if there has been late summer precipitation and cattle would also tend to range further away from water. Cattle would drift across Ward Valley to graze palatable shrubs in Homer Wash and in the Piute Mountains within desert tortoise critical habitat and may enter excluded areas. If the forage on the allotment is not enhanced by precipitation prior to or during either of the seasonal exclusion periods, cattle would remain closer to the mountains and reliable water sources, but cattle could occasionally drift into the excluded areas. If cattle do not remain out of the interim seasonal exclusion area, they would have to be removed from the allotment. Depending on the extent of favorable forage conditions, complete removal of the entire herd may be the only effective means to prevent cattle movement into areas of exclusion. If removal efforts were initiated, cattle would be gathered or trapped in small groups at facilities located next to water sources. This method of gathering would time consuming and more difficult to complete during the spring and fall or when cattle do not need to stay as close to reliable water sources.

The Valley Wells Allotment would receive a 57 percent temporary reduction in cattle use and a temporary 37 percent reduction in area of grazing use. The exclusion covers 80 percent of desert tortoise critical habitat, but 22,220 acres of tortoise critical habitat are available for grazing use (see Table 1 and Map 11), mainly located around water sources. All desert tortoise non-critical habitat (126,028 acres) is available for grazing use. The seasonal exclusion would be very difficult to maintain regardless of ephemeral forage quantity because most of the water sources are located in the middle of Shadow Valley are surrounded by tortoise critical habitat. As cattle move to different foraging areas and water sources located within the allotment such as along the pipeline in Shadow Valley, they would enter excluded areas. As cattle trail out long distances surrounding water sources such as Hallaoran Springs or other springs on the west side of the allotment, they could also enter the area of exclusion. If the pipeline was turned off in Shadow Valley, cattle as well as wild burros would move to the west and upper side of the allotment. If cattle do not remain out of the interim seasonal exclusion area, they would have to be removed from the allotment. If removal efforts were initiated, cattle would be gathered or trapped in small groups at facilities located next to water sources.

Under this alternative, the Horsethief Springs lessee would not be able to distribute cattle into 47,581 acres or 30 percent of the allotment during the exclusion periods (see Table 1 and Map 4). Otherwise impacts to Horsethief Springs Allotment are similar to those impacts discussed for Lazy Daisy and Valley Wells Allotments, except the lessee would not be restricted from running full permitted numbers. Fenced pasture boundaries within the Horsethief Springs Allotment are not complete and do not coincide with the boundary of the excluded area, and each of the pastures has a portion of the exclusion thereby reducing effectiveness of exclusion in the tortoise non-critical habitat. There is no developed water inside the excluded area, but under favorable ephemeral conditions cattle may go for several days without water and it could be difficult to restrict drift into any particular excluded area. During the spring seasonal exclusion period, if ephemeral production is high, cattle could drift into the northwest portion of the allotment including California Valley which is within non-critical desert tortoise habitat. During the fall seasonal exclusion period, forage may exhibit more vigor especially if there has been late

summer precipitation, and cattle could also range further away from water. If cattle do not remain out of the interim seasonal exclusion area, they would have to be removed from the allotment.

Pahrump Valley Allotment is located outside critical habitat. This action would exclude 7,680 acres from grazing use, however, the proposed exclusion would encompass the northern portion of the allotment and would only affect spring grazing use. This exclusion would equate to a 24 percent reduction in available rangelands (see Table 1 and Map 7). This action would reduce the lessee's flexibility to shift livestock in or out of areas when cattle use need to be distributed. However, the proposed action would be a minimal disruption to their current livestock operation for this interim period because the northern portion of the allotment currently has an inoperative well and very little grazing use presently occurs in this area. There would be no anticipated need to reduce the permitted use on the Pahrump Valley during the interim period because the lessee has historically ran low stocking rates and would be required to do so for the interim.

Approximately 98 percent of the Cady Mountain Allotment is within desert tortoise non-critical habitat where desert tortoise densities are probably low. The proposed action would exclude 88,320 acres from grazing use in the spring and fall. The 88,320-acre exclusion would encompass the eastern portion of the allotment, and would preclude cattle use of water from one well in the spring and fall (see Table 1 and Map 1). This exclusion would equate to a 38 percent reduction in available rangelands. The proposed action would also exclude a portion of the Mojave River at Afton Canyon. The exclusion of grazing use in Afton Canyon would be a permanent change to grazing use on the allotment. The exclusions would have a moderate impact to the current grazing operation because it reduces the lessee's ability to use rangelands associated with this well and eliminates grazing use in Afton Canyon thereby limiting available livestock water sources in the allotment. However, the majority of cattle use occurs outside the proposed exclusion area. The well at Hidden Valley would be inactivated and active herding of cattle by the lessee would be implemented during the exclusion periods to ensure that cattle would not graze the exclusion area. Because the well at Hidden Valley would be reactivated and made available to cattle during time outside the seasonal closure, it is expected that minor drift into the exclusion may occur for a few days after the well is inactivated. The stocking rates on this allotment have been historically low and are anticipated to remain so during this interim period there would be no restriction on stocking rates during the interim period.

The proposed action would be a measurable negative impact to the current cattle grazing operation for the Rattlesnake Canyon Allotment because this alternative would exclude 6,600 acres of desert tortoise non-critical habitat from grazing use in the spring and fall. The 6,600-acre exclusion within portions of the desert pasture would preclude cattle using at two developed springs. There would be a 23 percent reduction in available rangelands with a corresponding reduction in permitted use from 1,081 AUMs to 832 AUMs. The allotment also contains known populations of Parish's daisy, another listed species. There is currently one large population identified in the desert pasture and two smaller populations located in the mountain pasture. The southeastern boundary fence would be completed to stop cattle trespassing into adjacent wilderness and reduce impacts to listed plants. The lower portion of the

Rattlesnake Canyon may support low densities of tortoises, however above 4,000 feet it is unlikely to support tortoises. No other listed species are known to be present in the canyon. Under this alternative, The trailing of cattle through Rattlesnake Canyon would be terminated and the lessee would be required to truck animals to and from the desert and mountain pastures. Management of the lessee's cattle would be greatly encumbered by spending many days trucking animals instead of directly working to manage and efficiently distribute foraging cattle. There would have to be an additional 25 percent reduction in permitted use with the closure of Rattlesnake Canyon (see Table 1 and Map 8). With the canyon closed to trailing the mountain and desert pasture would be geographically distinct grazing units, each having approximately equal carrying capacities. To ensure adherence to established utilization threshold and to maintain rangeland health, substantial reductions in stocking rates would be necessary. The inactivation of developed springs within the exclusion area, and increased herding of cattle would be the most effective method of implementing the closure by the lessee. The expense and time to truck cattle added to the temporary reduction in permitted use would economically hamper the lessee's ability to maintain a viable livestock operation.

The proposed action would be a minor negative impact on the grazing operation of the Cronese Lake Allotment, primarily due to the loss of grazing areas. This reduces the lessee's ability to appropriately adjust cattle operations as need dictates. The 18,000-acre exclusion would encompass the western portion of the allotment. This exclusion would equate to a 28 percent reduction in available rangelands during the interim exclusion period (see Table 1 and Map 2). However, the proposed action would cause minor disruption to the current operation because the majority of grazing use occurs outside of the exclusion area, and the only developed stockwater occurs outside the exclusion area.. There are no anticipated needs to reduce permitted use because current cattle use has been reduced to a level that should maintain rangeland conditions.

The proposed action would require the implementation of a two-pasture system for Harper Lake Allotment. This is also a term and condition from the current BO. The north pasture which contains tortoise critical habitat would be deferred from grazing use in the spring and fall. The north pasture would be grazed during summer and winter. The implementation of the proposed action would exclude the 16,482 acres in the north pasture from grazing use during spring and fall for 5½ months. The exclusion would reduce available rangelands by 63 percent (see Map 3). The two-pasture system would continue after the proposed action interim period ceases. To ensure utilization of perennial forage does not exceed 40 percent and maintain rangeland health for the south pasture, the maximum stocking rate would be temporarily reduced from 50 cows to 24 cows for 6½ months. There would be an overall reduction of 6 percent in permitted use (see Table1). However, permitted use would have to be reduced by an additional 57 percent when cattle are move to the southern pasture which only represents 37 percent of available rangelands. Because the south pasture contains the only developed stockwater on public land, there is a low probability of drift into the exclusion area. The lessee would have to deactivate the well located on private land in the north pasture to ensure this level of compliance. In addition, the two pasture are partially separated by internal fencing, furthering the probability of compliance with the proposed action. There may be some level of delay in the reduction

of the stocking rate on the allotment because the lessee would probably have to sell off 28 cows, however this delay is not anticipated to be protracted. substantial This substantial reduction in permitted use and the potential dramatic fluctuation of the cattle herd on the allotment from one season to another constitutes a substantial negative economic impact to this cattle operation.

There would be measurable negative effects to the grazing operation of the Ord Mountain Allotment as a result of implementing the proposed action. The exclusion area for the Ord Mountain Allotment is comprised of 54,000 acres of critical desert tortoise habitat located in the western portion of the allotment. Five developed springs during 5½ months through spring and fall would be unavailable (see Table 1 and Map 6). By ensuring that these waters are unavailable to livestock, this portion of the allotment would be unavailable. This would result in a 35 percent reduction in available rangelands, however, permitted use would be reduced by 43 percent based on the proposed action (see Table 1) . The immediate construction of water control fences around developed springs would greatly reduce potential cattle drifting into the area of exclusion and protect riparian habitat outside of the exclusion period. The lessee's most effective method in keeping his cattle out of the exclusion area would constitute a substantial increase in herding, either on horseback or by motorized means. The large acreage of lessee owned and controlled private land should contain the cattle removed from the allotment with the 43 percent reduction during the seasonal closure. Depending on the lessee's financial situation, cattle restricted to private land would be feed for the interim period or sold as needed. These actions would constitute a substantial economic impact to this grazing operation.

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No grazing use would occur on Crescent Peak, Whitewater Canyon, Jean Lake, and Lanfair Valley Allotments. The lessee of the Whitewater Allotment have routinely taken non-use. Crescent Peak and Jean Lake Allotments are vacant and no grazing use would be allowed. The Lanfair Valley Allotment was terminated on November 14, 2001. The designation of the allotment and its boundary, allocation for perennial forage use, and related range improvements have been canceled and removed from the CDCA Plan. The Round Mountain Allotment will remain closed during the interim period to improve vegetative conditions after the Willow Fire.

The lessees of Kessler Springs Allotment would be required remove the entire herd during the interim period since 96% of the allotment overlaps critical and non-critical desert tortoise habitat and the cattle operation would be rendered ineffective. Once removal efforts were initiated, cattle would be herded and gathered at facilities located on or adjacent to the allotment.

On Valley View, a portion of the allotment (83%) would still be available for grazing use, however, due to lack of natural barriers and fencing , it is expected that cattle will drift onto the excluded area since water sources are located within the desert tortoise critical habitat. Cattle are also expected to drift onto the excluded of the adjacent Kessler Springs Allotment. Cattle would need to be removed from the part of the Valley View Allotment north of I-15 to prevent them from drifting into tortoise critical

habitat in either allotment. That portion of the Valley View Allotment south of I-15 near the community of Mountain Springs could still be grazed.

A provision of the proposed action preclude granting grazing use (through application) on those allotments where the lessee requests non-use. Under this provision non-use on cattle allotments would continue until the proposed actions ceases or until the appropriate land use plan decides the disposition of the respective allotment. Impacts from this provision would be limited to those lessees taking or expecting to take non-use.

No Action (current management)
Livestock grazing would continue to be managed and authorized under the appropriate management plans, regulations, and other policies. Current grazing management is described in the affected environment.

Alternative 1

Sheep Allotments

Under alternative 1 most sheep allotments would continue to be grazed in the same manner as the proposed action, except grazing use would be allowed in Rice Valley Allotment if an approved grazing application coincided with sufficient ephemeral forage. Ford Dry Lake would continue to be closed to sheep use under alternative 1.

Cattle Allotments

Under this alternative impacts to Chemehuevi, Pilot Knob, and Piute Valley Allotments would be similar to the proposed action.

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Under this alternative Hansen Common, Rudnick Common, Walker Pass, and Tunawee Common Allotments grazing use would not be precluded with seasonal or total cattle grazing exclusion. Impacts would be similar to the no action or current management.

Grazing use would be managed on the Lacey-Cactus-McCloud Allotment to preclude cattle use in the exclusion area as discussed under the proposed action.

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Clark Mountain, Cronese Lake, Harper Lake, Lazy Daisy, Ord Mountain, Valley Well and Valley Wells Allotmentswould continue to be managed under the proposed action. Under this alternative that portion of Rattlesnake Canyon Allotment in tortoise non-critical habitat would remain open. The Rattlesnake Canyon would be used for trailing cattle. The small riparian area in Rattlesnake Canyon

would be fenced to improve vegetative conditions. Continued use of the canyon for trailing of cattle would ensure that a viable, stable livestock operation would continue. All areas of tortoise non-critical habitat within the Horsethief Springs Allotment would remain available for cattle use which would continue this grazing operation. Under this alternative a total of 96,000 acres of non-critical habitat for the desert tortoise would remain available to grazing in the Cady Mountain and Pahrump Valley Allotments. There would be no seasonal exclusion of livestock grazing in the spring and fall during the interim period of the proposed action.

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Under alternative 1, Jean Lake, Kessler Springs, Valley View, Lanfair Valley, Round Mountain, and Whitewater Canyon would continue to be managed under the proposed action.

The 23 acres of desert tortoise critical habitat and 6,847 acres of non critical habitat in the Crescent Peak Allotment would be managed the same as in the no action alterative. The allotment is vacant but should the lease be issued to a qualified applicant during the interim, the allotment could be activated if the required grazing lease issuance processes were completed and a decision issued.

See attached maps in APPENDIX A for the proposed boundary of the cattle grazing exclusion areas.

References

Information provided from BLM records and personal communication among staff.

SOCIAL AND ECONOMIC VALUES

A. Affected Environment

Social and economic factors, including family traditions, self sufficiency, good character, ranching community interest and involvement, conservation and environmental preservation values, are associated with these allotments and the lessees that manage sheep and cattle use. The allotments provide a source of income and employment to the community and region. Uses of the allotments, including livestock grazing, recreation, and other uses contribute goods or services to the area. These goods and services minimally contribute to the regional economy.

Sheep Allotments

The lessees for Antelope Valley, Boron, Bissell, Buckhorn Canyon, Cantil Common, Goldstone, Gravel Hills, Hansen Common, Johnson Valley, Lava Mountain, Monolith-Cantil, Rudnick Common, Shadow Mountain, Spangler Hills, Stoddard Mountain, Superior Valley, and Tunawee Common Allotments reside in western San Bernardino and Riverside Counties and Kern County. A majority of their income is derived from sheep ranching and other related agricultural business. Many of the lessees' herders are from other countries working under a three-year U.S. visa.

The lessee for the Rice Valley Allotment lives and operates his sheep operations from Idaho. His bands of sheep winter in alfalfa fields near Blythe, California. At some point, in late winter or early spring the farmers want their sheep off the fields so they can start cropping hay. The portable facilities are gathered by herders and transported by vehicle to the next grazing location. This procession of moving all of the sheep continues until the sheep are grazing on their summer range and then the process is reversed with the sheep moving toward their wintering fields near Blythe. Most of the grazing activities appear to occur out of state. When forage is available on the allotment, grazing use can occur. Grazing use occurs on the Ford Dry Lake Allotment in much the same way as the Rice Valley lessee except the lessee for Ford Dry Lake Allotment base of operation is near Casa Grande, Arizona. That portion of Arizona is roughly in the same weather belt as the Ford Dry Lake Allotment. Consequently, when there is high production of ephemeral forage in Ford Dry Lake, there is usually good production of forage near Casa Grande. This limits the need for forage of the lessee's sheep on Ford Dry Lake Allotment. The allotment also falls within the area of the nine-mile buffer policy for bighorn sheep (see the WILDLIFE section of this chapter).

Cattle Allotments

Most of the lessees who own and graze cattle in the CDCA are small family operations and except where noted this applies to most of the lessee listed in the sections below. Their primary source of income is not from their livestock operations, but from jobs they work during the week. These ranches may have once provided the main source of income and employment for several families in the local communities and surrounding region. These are cow-calf operations and occasionally steers are stocked when good economic times and forage permit. Limited number of lessees offer work to

employees on a full-time basis, but pay temporaries during peak periods of need. Most temporaries are hired during the weekend when most qualified people are available. Temporaries may work as much as 16 hours on any given Saturday. Most temporary work is related to handling cattle such as branding. Ranch families help each other with critical skills in times of critical need when family members are available. Low beef prices and high production costs over the past few years has kept grazing fees as low as the grazing fee schedule allows and this also means that net earnings for ranching efforts are low.

Many allotments do not have fences or natural barriers that would prevent cattle from walking or grazing into a exclusion area. In the event that the lessee's livestock are found in trespass, BLM's trespass fees currently range from $12,30 to $36.90 per AUM Any trespass fees could quickly amount to a large financial obligation that must be paid prior to additional grazing use. Removal of trespass livestock from the exclusion area must occur within 48 hours. In addition to trespass fees, settlement of a trespass case could include the full costs for damages to public lands and other property of the United States, and restitution of reasonable expenses incurred by the BLM.

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Pilot Knob, Chemehuevi, and Piute Valley Allotments are not currently used. These allotments are classified for grazing use of ephemeral forage and cattle use is contingent upon production of available ephemeral forage. The Pilot Knob, Chemehuevi, and Piute Valley Allotments once provided the main source of income and employment for several families in the local communities and the surrounding region.

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Lessees of the Hansen Common Allotment derive their primary income from non ranching activities. The lessees of the Rudnick Common and Lacey-Cactus-McCloud Allotments, as well as Lessee 2 the Walker Pass Allotment do not derive their primary income from their livestock operations, but employ managers and ranch hands whose income is dependent on these ranching operations. However, Lessee1 and 3 of the Walker Pass Allotment and the lessee of the Tunawee Allotment derive their primary income from their livestock operations and other agricultural related activities.

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The lessees for the Ord Mountain, Lazy Daisy, and Valley Wells derive their primary income from their livestock operation and other agricultural activities for several families in the local communities and the surrounding regions. The ranches are small family cow-calf operations and may have one full time employee to oversee daily operations.

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Some lessees for Crescent Peak, Jean Lake, Kessler Springs, Valley View, Lanfair Valley, Round Mountain, and Whitewater Allotments are not directly in the livestock business. Lessees include The Wildlands Conservancy (TWC), The Nature Conservancy (TNC), and The National Parks Foundation. These groups are non-profit preservation/conservation-oriented organizations that acquire private or other lands for the allotment's base property and manage them for preservation and recreational purposes. A portion of the public, mainly outside of the local community and surrounding region, support the organization's preservation efforts including acquiring and managing lands intermingled with public lands. Some organizations gain no appreciable economic benefit from the use of the allotments.

The TWC is the current lessee of Whitewater Canyon and Pilot Knob Allotments. The Nature Conservancy was the lessee on the vacant Jean Lake and Crescent Peak Allotments. In the past TNC took non use on these allotments. If these leases are renewed to TNC, the organization intends to graze cattle. The National Parks Foundation (NPF), is the current lessee on the Kessler Springs Allotment (pending completion of application and transfer) and also intends to graze cattle. The lessee for Valley View Allotment derives his primary income from their livestock operation and other agricultural activities. The lessee employees a manager to direct daily grazing and ranch operation. The Lanfair Valley Allotment was terminated on November 14, 2001, after the base property was acquired and the lease was relinquished by the NPF.

B. Environmental Consequences (Social and Economic Values)

Proposed Action

The proposed action may result in a substantial temporary decrease of livestock grazing as an economic presence in the CDCA. To a lesser degree, this regional decrease in grazing use may result in a lower economic output for the livestock industry as a whole. Operators who are highly dependent on income from affected allotments might be temporarily or permanently forced out of the livestock industry or to attempt to establish operations elsewhere. Businesses that depend on livestock producers such as suppliers of agricultural implements, fencing materials, and supplemental feed may also be negatively impacted by reductions in livestock numbers on federal range. Employees of livestock operators may be adversely impacted through wage cuts or temporary or permanent job loss. Businesses located elsewhere engaged in livestock transport as well as slaughter and processing facilities may also face negative economic impacts due to decreases in livestock numbers on federal lands.

If lessees can not keep their cattle out of total exclusion areas revenue may be lost by reducing the days they are allowed to graze on their allotments. If lessees can not keep their cattle out of seasonal exclusion areas revenue may be lost by the addition of days on to the excluded time. In addition Administrative action may be required under the proposed action which would result in cancellation of the number of animal days per year authorized for the allotment.

Sheep Allotments

The total interim closure on Rice Valley Allotment would result in relatively minor economic impacts to the lessee because they have only taken occasional use of this allotment in the last ten years. The proposed action would result in increased negative attitudes among livestock operators for preservation efforts.

Adverse social and economic impacts resulting from the proposed action on Ford Dry Lake Allotment would be similar to that of Rice Valley Allotment. However, adverse impacts are lessened by larger resource concerns. The implementation of BLM policy for domestic sheep grazing in and near occupied bighorn sheep habitat would result in a greater justification for non-use thus diminishing adverse social impacts to the livestock operator.

Social and economic impacts to the Antelope Valley, Boron, Bissell, Buckhorn Canyon, Cantil Common, Goldstone, Gravel Hills, Hansen Common, Johnson Valley, Lava Mountain, Monolith-Cantil, Rudnick Common, Shadow Mountain, Spangler Hills, Stoddard Mountain, Superior Valley, and Tunawee Common Allotments would not occur under the proposed action.

Cattle Allotments

Social and economic impacts to Chemehuevi, Pilot Knob, Piute Valley Allotments from the proposed action would not occur since impacts occurred several years ago when grazing ceased.

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In general for the remaining cattle allotments, economic impact to individual lessees as a result of implementing the proposed action would vary, and would depend on several factors: The degree or percentage the allotment is seasonally or totally excluded, the number of range improvements that could not be used, the potential increased maintenance needs on range improvements which would be used, the potential cost to the lessee to selling and purchasing cattle, the cost of feeding on their base property, the cost of leasing private pasture, and most importantly the loss of net revenue to the lessee by reducing potential calf production as the number of productive cows shrinks over the course of the proposed action. In those allotments where an interim reduction in the permitted use would be required to implement the proposed action, there would be negative impact to the economic viability of those allotments. In addition, under the proposed action lessees would be further penalized by not being allowed to apply for temporary grazing use on vacant or partial vacant allotments where the lessee wishes to take non-use until completion of the interim period. Economic impacts to individual ranching operations would not be regionally significant.

The lessee of the Hansen Common allotment does not typically graze cattle in the area of exclusion. There are no barriers between cattle currently grazing and the area excluded from cattle use. Consequently, there is a slight possibility that cattle could walk into the area of the exclusion.

The Tunawee Common allotment would not be impacted socially or economically by the proposed

action. The lessee has taken non-use for cattle since 1993. Use on the allotment since 1993 has been by sheep. In addition the area that is excluded from grazing is in an area that is not grazed by cattle or sheep.

Lessee 1 of the Walker Pass Allotment would not be impacted economically from the proposed action because the lessee routinely removes their cattle from the allotment by February 28.

Table 5. Estimated Costs to Lessees From Proposed Action

Allotment Name	Number of Cattle removed	AUM Reduction	Loss of Grazing Fees 1/	Loss of county Revenue from loss of grazing fee 2/	Maximum Gross Revenue Lost 3/	Options for cattle removed during seasonal and total exclusion periods other than removing to lessees pasture or selling.							
						Feeding Hay 4/				Private Pasture Leasing 5/			
						800 lbs		1100 lbs		Pasture type		Transportation	
						Low Cost	High Cost	Low Cost	High Cost	Low Cost	Full Service	110 Miles	220 Miles
Harper Lake	28	456	$616	$308	$7,840	$15,946	$22,015	$17,420	$24,050	$4,560	$9,120	$360	$1,298
Kessler Springs	87	1,042	$1,407	$704	$24,360	$49,742	$68,306	$54,340	$74,620	$10,420	$20,840	$1,079	$3,894
Lazy Daisy	158	1,238	$1,671	$836	$44,240	$41,293	$56,406	$45,110	$61,620	$18,960	$37,920	$1,799	$6,490
Ord Mountain	135	2,361	$3,187	$1,594	$37,800	$77,112	$106,029	$84,240	$115,830	$23,610	$47,220	$1,439	$5,192
Rattlesnake	42	541	$730	$365	$1,760	$23,979	$32,963	$26,130	$36,010	$5,410	$10,820	$719	$2,596
Rudnick Common	225	1,238	$1,671	$209	$63,000	$58,905	$80,325	$64,350	$87,750	$12,380	$24,760	$3,237	$11,682
Valley View	20	522	$705	$353	$5,600	$11,424	$15,708	$12,480	$17,160	$2,370	$4,740	$359	$1,298
Valley Wells	176	2,116	$2,857	$1,429	$49,280	$100,555	$138,278	$109,850	$151,060	$21,160	$42,320	$1,799	$6,490
Walker Pass Lessee 2	160	650	$878	$110	$44,800	$28,560	$39,984	$31,200	$43,680	$6,500	$13,000	$1,799	$6,490
Walker Pass Lessee3	153	614	$829	$104	$42,840	$27,370	$38,199	$29,900	$41,730	$6,140	$12,280	$1,439	$5,192
Totals	1184	10778	$14,550	$6,012	$321,520	$434,886	$598,213	$475,020	$653,510	$111,510	$223,020	$14,029	$50,622

1/ AUMs X $1.35 (2001 grazing fee)

2/ 50% of the grazing fee is returned to the county in allotments located outside the grazing district.
12.5% of the grazing fee is returned to the county in allotments located inside the grazing district.

3/ Assuming a 100% calf crop of X 400 lb. per calf weaning weight X 70 cents per pound selling price.

4/ 1 cow will eat between 800 and 1,100 lbs. of hay per month X number of months of no use X number of cows X $119 per ton of low priced hay OR X $130 per ton of higher priced hay.

5/ **Pasture type:** $10 per AUM for low-cost pasture OR $20 per AUM for full service higher-cost pasture X number of AUMs.
Transportation: Number of cattle ÷ 37 cattle per truck load = number of trucks X $3.27 per mile of loaded truck for 110 miles OR X $5.90 per mile of loaded truck for 220 miles.

Lessee 2 of the Walker Pass Allotment would have to hire range riders to keep the cattle out of the areas excluded. Even with the use of range riders it is unlikely that cattle would adequately be kept out of the exclusion areas. The only way to ensure cattle stay out of the exclusion areas would be to remove them from the allotment. As shown in Table 5 this would result in a reduction of 160 cattle for 3¾ months during the seasonal exclusion for a loss of $44,800 in maximum gross revenue. Table 5 lists options for cattle removed, as well as figures and formulas. If the lessee feeds hay it will cost a minimum of $28,560 and a maximum of $43,680. If the cattle are moved to private pasture it will cost a minimum of $8,299 and a maximum of $19,490. Based on the figures listed above the most economical choice would be to try and find private pasture. If no private pasture is available the lessee may feed hay or sell the cattle. Kern county would lose $110 in revenue.

Lessee 3 of the Walker Pass Allotment would have to hire range riders to keep the cattle out of the areas excluded. Even with the use of range riders it is unlikely that cattle would adequately be kept out of the exclusion areas. The only way to ensure cattle stay out of the exclusion areas would be to remove them from the allotment. As shown in Table 5 this would result in a reduction of 153 cattle for 3¾ months during the seasonal exclusion for a loss of $42,840 in maximum gross revenue. Table 5 lists options for cattle removed, as well as figures and formulas. If the lessee feeds hay it will cost a minimum of $27,370 and a maximum of $41,730. If the cattle are moved to private pasture it will cost a minimum of $7,579 and a maximum of $17,472. Based on the figures listed above the most economical choice would be to try and find private pasture. If no private pasture is available the lessee may feed hay or sell the cattle. Inyo county would lose $104 in revenue.

The seasonal exclusion area in the Rudnick Common Allotment encompasses the entire dove springs pasture. During the seasonal exclusion, cattle may be located in other pastures elsewhere in the allotment. The only way to ensure cattle stay out of the exclusion areas would be to remove the cattle from the allotment. As shown in Table 5 this would result in a reduction of 225 cattle for 5½ months during the seasonal exclusion for a loss of $63,000 in maximum gross revenue. Table 5 lists options for cattle removed, as well as figures and formulas. If the lessee feeds hay it will cost a minimum of $58,905 and a maximum of $87,750. If the cattle are moved to private pasture it will cost a minimum of $15,617 and a maximum of $36,442. Based on the figures listed above the most economical choice would be to try and find private pasture. If no private pasture is available the lessee may feed hay or sell the cattle. Kern county would lose $209 in revenue.

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The effect to the lessee's grazing operation from the removal of 42 head from the Rattlesnake Canyon Allotment under the proposed action varies. Because the lessee has no private pasture within or adjacent to the allotment this option is not applicable. The option of selling off the 42 head would result a short term gain in revenue to the lessee, however it is unknown if the lessee would have the income to purchase 42 replacement cows if the canyon re-opens to the trailing of cattle. The selling off of these 42 head may result in a permanent reduction in this operations base herd size, reducing the lessee ability to

generate revenue from his cow-calf operation on public lands by 50 percent. As shown in Table 5 this would result in a reduction of 42 cattle for the foreseeable future for a loss of $1,760 in maximum gross income per year. This action would remain in affect until the signing of the Record of Decision (ROD) for the West Mojave bio-regional amendment to the CDCA Plan. Table 5 lists options for cattle removal, as well as figures and formulas. If the lessee feeds hay it will cost a minimum of $23, 979 and a maximum of $36,010. If the cattle are moved to private pasture it will cost a minimum of $5,410 and a maximum of $10,820. Based on the figures listed above the most economical choice would be to try and find private pasture. If no private pasture is available the lessee may feed hay or sell the cattle. San Bernardino county would lose $365 in revenue. The long term financial impact to this lessee's livestock operation from the implementation of the proposed action is not positive.

The closure of Rattlesnake Canyon to the trailing of cattle would result in an additional expenses not displayed in Table 5. Additional costs that would be incurred by the lessee when the movement of cattle from one pasture to the next would required the hauling of cattle by truck or trailer between the mountain and desert pastures. It is 30 miles from Two-Hole corral in the desert pasture to the southern portion of the mountain pasture. Approximately 20 miles is on a paved highway (247) while the remaining 10 miles is a rough, poorly maintained dirt road that limits speed to a maximum of 20 miles per hour. The lessee would have to conduct a series of cattle gathering operations for a portion of the herd prior to shipping from Two-Hole corral. Cattle awaiting transport at the corral have to be fed hay. The cost of hay is about $2.00 per day per cow and assuming 20 cattle are shipped per day, hay would cost about $40. It would take 3 to 5 trips with a trailer to
haul 6 to 8 cows with calves. The lessee could make 1 to 2 trips per day. The lessee is unable to devote a lot of time to the cattle operation during the week, most efforts would be confined to weekends. Once cattle are hauled to mountain pasture, they are unloaded and cows and calves mothered-up so they can be moved to a desired area in the pasture. Depending on the ride and the temperament of the cattle, this process may take considerable time. The lessee may have to hire a temporary employee to assist him during trucking. This is an especially critical time, the lessee could lose a calf during transport, cows could abort calves from stress during trip, and other factors would reduce the calf crop or retard weight gain. Fuel cost would average $25 to $30 per trip plus there is wear and tear on the truck and trailer for another $20 to $25 per trip. On average, estimated costs for trucking without paying an employee would be a minimum of $100 per day.

The effect to the lessee's grazing operation from the removal of 28 head from the Harper Lake Allotment under the proposed action varies. Because the lessee has no private pasture within or adjacent to the allotment this option is not applicable. The option of selling off the 28 head would result a short term gain in revenue to the lessee, however it is unknown if the lessee would have the income to purchase 28 replacement cows if the two-pasture grazing system was ever modified. The selling off of these 28 head may result in a permanent reduction in this operations base herd size, reducing the lessee ability to generate revenue from her cow-calf operation on public lands by more than 50 percent. As shown in Table 5 this would result in a reduction of 28 cattle for 61/2 months during the seasonal exclusion for a loss of $7,840 in maximum gross revenue. Table 5 lists options for cattle removed, as

well as figures and formulas. If the lessee feeds hay it will cost a minimum of $15,946 and a maximum of $24,050. If the cattle are moved to private pasture it will cost a minimum of $4,560 and a maximum of $9,120. Based on the figures listed above the most economical choice would be to try and find private pasture. If no private pasture is available the lessee may feed hay or sell the cattle. San Bernardino County would lose $308 in revenue. The long term financial impact to this lessee's livestock operation from the implementation of the proposed action is not positive.

The effect to the lessee grazing operation from the removal of 135 head from the Ord Mountain Allotment under the proposed action varies. Because the lessee has limited private pasture within the allotment this option would probably be used, but this use is limited by available forage. The option of selling off the 135 head would result a short term gain in revenue to the lessee, however it is unknown if the lessee would have the income to purchase 135 replacement cows when the interim period is concluded. The selling off of these 135 head may result in a permanent reduction in this operations base herd size, reducing the lessee ability to generate revenue from her cow-calf operation on public lands by more than one third. As shown in Table 5 this would result in a reduction of 28 cattle for 61/2 months during the seasonal exclusion for a loss of $37,800 in maximum gross revenue. Table 5 lists options for cattle removed, as well as figures and formulas. If the lessee feeds hay it will cost a minimum of $77,112 and a maximum of $115,830. If the cattle are moved to private pasture it will cost a minimum of $23,610 and a maximum of $47,220. Based on the figures listed above the most economical choice would be to try and find private pasture. Any one of these actions alone may cause the lessee to leave the livestock business. The long term financial impact to this lessee's livestock operation from the implementation of the proposed action is not positive.

There would be increased costs to the lessees and the BLM associated with the implementation of these seasonal closures on the Cady Mountain, Cronese Lake and Pahrump Valley Allotments. However these cost would be minimal to the lessees, and would primarily consist of additional riding, gathering, driving, and the lessee's time/labor. There would be no anticipated need to remove livestock from these allotments for the reasons discussed in the Livestock section, so there would be no need to sell off livestock, place on private property and feed hay, or lease private pasture. No further economic analysis is necessary.

The lessees of the Lazy Daisy Allotment are already voluntarily operating at a reduced stocking level, due to forage conditions and lack of extensive range improvements. In the spring, if ephemeral forage production is high, complete removal of the entire herd may be the only effective means to control cattle movement. It could take the lessee a considerable amount of time to find and completely gather cattle out of remote areas such as wilderness, and if alternative pasture was found, it could cost the lessee to pay for fees and transport cattle. The proposed action would eliminate the possibility of maximizing the herd size during the interim period. However, grazing use on the Lazy Daisy Allotment would limited to 1,300 AUMs under the proposed action. This is a reduction of 1,892 AUMs or 158 cattle year-long. If the remaining herd of 108 cattle cross into the area of exclusion, the cattle would have to be removed from the allotment. As shown in Table 5 this would result in a reduction of 158 cattle for 5 1/2 months

during the seasonal exclusion for a loss of $44,240 in maximum gross revenue. Table 5 lists options for cattle removed, as well as figures and formulas. If the lessee feeds hay it will cost a minimum of $41,293 and a maximum of $61,620. If the cattle are moved to private pasture it will cost a minimum of $20,759 and a maximum of $44,410. It is unknown which option the lessees of the Lazy Daisy Allotment are more likely to select. One or more options could be utilized to effect an efficient change in operation. Based on the figures listed above the most economical choice would be to try and find private pasture. If no private pasture is available the lessee may feed hay or sell the cattle. San Bernardino county would lose $836 in revenue.

The lessee of the Valley Wells Allotment is anticipating to operate the cattle use at near permitted use. In the spring, if ephemeral forage production is high, complete removal of the entire herd may be the only effective means to control cattle movement. It could take the lessee a considerable amount of time to find and completely gather cattle out of remote areas such as wilderness, and if alternative pasture was found, it could cost the lessee to pay for fees and transport cattle.The remaining herd of 141 cattle would have potential access to the area of exclusion. The proposed action would eliminate the possibility of maximizing the herd size during the interim period. However, grazing use on the Valley Wells Allotment would limited to 1,692 AUMs under the proposed action. This is a reduction of 2,116 AUMs or 176 cattle year-long. As shown in Table 5 this would result in a reduction of 176 cattle for 5 1/2 months during the seasonal exclusion for a loss of $49,280 in maximum gross revenue. Table 5 lists options for cattle removed, as well as figures and formulas. If the lessee feeds hay it will cost a minimum of $1000,555 and a maximum of $151,060. If the cattle are moved to private pasture it will cost a minimum of $22,959 and a maximum of $48,810. The lessee of Valley Wells Allotment could choose to follow any of the above mentioned options or a combination. If the remaining herd of 141 cattle cross into the area of exclusion, the cattle would have to be removed from the allotment. If no private pasture is available the lessee may feed hay or sell the cattle. San Bernardino county would lose $1,429 in revenue. Based on the figures listed above the most economical choice would be to try and find private pasture.

The area of the cattle grazing exclusion covers 30 percent of Horsethief Springs Allotment. Available fences would limit cattle movement into the exclusion area. All developed water sources are found outside of the exclusion area and would further limit access into the exclusion area. The drift from the water sources to the exclusion areas would be minimal and reductions in grazing use are not anticipated. Costs associated for additional moving of cattle away or out of the exclusion area unknown.

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The social and economic impacts to Crescent Peak, Jean Lake, Kessler Springs, Valley View, Lanfair Valley, Round Mountain, and Whitewater Canyon Allotments are varied. For those allotment, controlled by preservation organizations, the preservation/conservation organizations' status for their public would be beneficial under the proposed action. The groups promote themselves as preservationist-oriented organizations and any non-use of the allotments, as long as the leases remain in

good standing, would be viewed positively by both the organization and their financial sponsors. Social benefits would be gained by having direct control over grazing use on these allotments and taking non-use to the greatest extent possible. It is expected that there would be no adverse economic impacts to these type of lessees resulting from the interim measures prescribed in the proposed action. As non-profit land conservancy organizations, the cost savings realized by temporarily not investing money in a livestock operation would allow the groups to divert funds into land acquisition, management, administrative functions, and other endeavors. Economic benefits to the region from any past and current grazing on these operations have been relatively minor. If lessees take non-use on allotments that could benefit from conservation, grazing would not be authorized to any other livestock operator for the interim period of the proposed action. There would be no indirect economic impact because no other livestock operator other than the lessee currently relying on the allotments as part of their livelihood. However, an unknown amount of tax revenue would be lost to San Bernardino County when cattle historically using the allotment are removed. Cattle have been removed from the BLM administered portion of the Lanfair Allotment and the allotment was canceled. No other costs or fees will be collected by the BLM for this allotment.

Cattle are expected to be removed from the Ivanpah Lake pasture of Valley View and Kessler Springs Allotment. All cattle use, 1,042 AUMs, on Ivanpah Lake in Kessler Springs Allotment would be excluded. It is expect that all cattle use, 424 AUMs on Ivanpah Lake in Valley View Allotment would be excluded as well. Although, the proposed action calls for excluding cattle use on 5,779 acres in the Valley View Allotment. These portions of Valley View and Kessler Springs Allotment have historically been grazed in common. Approximately 56 percent of the Valley View Allotment is within the Ivanpah Lake use area, this equates to a 237 AUMs effectively reduced from the allotment.

As shown in Table 5 this would result in a reduction of 87 cattle for the year long exclusion on the Kessler Springs Allotment for a loss of $24,360 in maximum gross revenue. Table 5 lists options for cattle removed, as well as figures and formulas. If the lessee feeds hay it will cost a minimum of $49,742 and a maximum of $74,620. If the cattle are moved to private pasture it will cost a minimum of $11,499 and a maximum of $24,734. Based on the figures listed above the most economical choice would be to try and find private pasture. If no private pasture is available the lessee may feed hay or sell the cattle. San Bernardino county would lose $704 in revenue.

The lessee of the Valley View Allotment is expected to lose grazing use of approximately 237 AUMs. Grazing use on the Valley View Allotment would limited 187 AUMs under the proposed action. This is a reduction of 237 AUMs or 20 cattle year-long. The reduction of 20 cattle would continue until requirements of the proposed have been met. As shown in Table 5 this would result in a reduction of 20 cattle for the year long exclusion on the Valley View Allotment for a loss of $5,600 in maximum gross revenue. Table 5 lists options for cattle removed, as well as figures and formulas. If the lessee feeds hay it will cost a minimum of $11,424 and a maximum of $17,160. If the cattle are moved to private pasture it will cost a minimum of $2,729 and a maximum of $6,038. Based on the figures listed above the most economical choice would be to try and find private pasture. If no private pasture is

available the lessee may feed hay or sell the cattle. San Bernardino county would lose $705 in revenue.

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To summarize, as shown in Table 5 this would result in a reduction of 1,184 cattle for the seasonal or year long exclusion on the allotments, with a AUM reduction of 10,778 AUMs, and a loss of $321,520 in maximum gross revenue. Table 5 lists options for cattle removed, as well as figures and formulas. If the lessees feeds hay it will cost a minimum of $434,886 and a maximum of $653,510. If the cattle are moved to private pasture it will cost a minimum of $125,539 and a maximum of $273,642. Based on the figures listed above the most economical choice would be to try and find private pasture. If no private pasture is available the lessee may feed hay or sell the cattle. Counties would lose $6,012 in revenue.

No Action (current management)
There would be no change to lessee operations or economic conditions since this alternative would not modify permitted use or season of grazing use.

Alternative 1
All allotments listed under Alternative 1 that have no exceptions noted would have similar social-economic impacts as under the no action alternative (see Table 4). Social and economic impacts to those allotments with exceptions described would be the same as the proposed action. The lessees would not lose any revenue from a reduction in grazing use area or season of use. Lessees would continue to benefit from the forage available during ephemeral seasons. Losses in revenue do to non compliance with the Interim total and seasonal exclusions would not be incurred by the lessees.

The implementation of this alternative would allow for continued use of Rattlesnake Canyon for the trailing of cattle. Under this alternative the continued trailing in the canyon would allow the lessee to continue an economically viable ranching operation.

This alternative would also allow current management to continue on the Horsethief Springs Allotment and lessen the social and economic impacts which could result from the proposed action since there are no resource concerns on this allotment which can not be easily mitigated. The probable acceptability of this alternative to the various stakeholder groups would be higher than the proposed action. This alternative might allow the Crescent Peak Allotment to serve as a relief area for cattle displaced by the proposed action, should a grazing authorization be issued to an affected lessee.

References

George Deboer, personal communication, Deboer and Sons Trucking, Porterville, California.

Mark Gish, personal communication, Bishop Field Office, Bureau of Land Management-USDI,

Bishop, California.

John Hemme, personal communication, John Hemme Hay Co., Lancaster, California.

Charlie Tadema, personal communication, Charlie Tadema, Inc., Ontario, California.

Tip Tipton, personal communication, Tipton Ranch, Kelso Valley, California.

VEGETATION

A. Affected Environment

The vegetative communities within the allotments vary with elevation, available water, soils, slope and annual precipitation. Terrestrial natural communities have been mapped using the classification used by the California Natural Diversity Database of the Natural Heritage Division in the California Department of Fish and Game (Robert F. Holland, Ph.D., 1986). The primary plant communities occurring within the affected area are Mojave Creosote Bush Scrub which is the characteristic plant community of the Mojave Desert, and Sonoran Creosote Bush Scrub, which is characteristic of the Lower Colorado Sonoran Desert. Other communities include Mixed Mojave Scrub, Desert Grassland, Alkali Sink, Desert Dry Wash Woodland, Semi-Desert Chaparral, Blackbrush Scrub, Joshua Tree Woodland, and Pinyon Pine/Juniper Woodland. Riparian vegetation is discussed in the Wetland/Riparian Zone Section on page 42. Following is a description of the key plant species or plant communities which may be affected by the proposed action.

The Mojave Creosote Bush Scrub - This community occurs from 75 meters below sea level to 1000 meters above sea level, in well drained soils found on alluvial fans, bajadas and upland slopes. The dominant perennial species in a Creosote Bush Scrub plant community is the creosote bush (*Larrea tridentata*) which is also the most abundant shrub in the California Desert. A Creosote Bush Scrub plant community diversity is characteristically low to medium. Some associated plant species in this community include white bursage (*Ambrosia dumosa*), Ephedra species (*Ephedra* sp.), and desert senna (*Senna armata*). Desert washes that occur within this community support additional species, the most common being the catclaw acacia (*Acacia greggii*) and desert willow (*Chilopsis linearis*).

The Sonoran Creosote Bush Scrub - This community occurs below 910 meters and integrates broadly with Mojave Creosote Bush Scrub in southeastern San Bernardino County and eastern *Riverside County. The community dominates well drained secondary slopes, bajadas, and* valleys in the lower Colorado desert. Diversity is low, yet higher than its Mojave counterpart. Creosote bush dominates this community with many species of ephemeral herbs flowering in late February and March if winter rains are sufficient. Other common species include white bursage, brittlebrush (*Encelia farinosa*), and ocotillo (*Fouquieria splendens*). The community is laced with washes exhibiting wash woodland species such as ironwood (*Olneya tesota*) and palo verde (*Cercidium floridium*).

The Mixed Mojave Scrub - This community occurs between 300-1500 meters elevation on all slopes in shallow and deep soils that are occasionally rocky. The Mixed Mojave Scrub community is comprised primarily of the dominant Yucca species (*Yucca schidigera, Yucca bacata*) and associated species like winter fat (*Kraschenninnokovia lanata*), boxthorn species (*Lycium* sp.), spiny menodora (*Menodora spinescens*), spiny hopsage (*Grayia spinosa*) and cacti species (*Opunita sp., Mammallaria sp., Echinocactus sp., Ferocactus sp., Echinocerus sp.*).

The Desert Grassland - (Big Galleta series) - This community occurs from 75 meters below sea level to 1400 meters above sea level on flat ridges, lower slopes and stabilized sand dunes. The Desert Grassland community is dominated by big galleta *(Pleuraphus rigida)* with associated native and non-native grasses including black grama *(Bouleloua eriopoda*), needle grama (*Bouteloua aristidoides var. aristidoides*), Indian rice grass (*Achnatherum hymenoides*), desert needle grass (*Achnatherum speciosum*), fluff grass (*Erioneruon pulchellum*), red brome (*Bromus madritensis ssp. rubens*), Mediterranean grass (*Schismus* sp.) and cheat grass (*Bromus tectorum*).
The Desert Dry Wash Woodland - This community is composed of dense, drought-deciduous, microphyllous species occurring in dry washes of the lower Mojave and Colorado deserts, though mostly in frost-free areas of the Colorado desert. These washes typically have braided channels that are substantially rearranged with every surface flow event. Typical plant species present are ironwood, palo verde, desert broom (*Baccharis sarothroides*), and burrobrush (*Hymenoclea monogyra*).

The Semi-Desert Chaparral - This community is common in the San Bernardino mountains between 600 and 1500 meters. It its normally seen at the upper edges of Sonoran and Mojave communities. It is similar to other chaparral communities but occurs in areas that are a bit warmer and drier in the summer and colder in the winter with upper extent often integrating with Pinyon Pine/Juniper Woodlands. This community is also less fire-prone than other chaparrals due to lower fuel loadings. Common species are chemise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos glauca*), California buckwheat (*Eriogonum fasciculatum*), and sugar sumac (*Rhus ovata*).

The Alkali Sink - (Bush Seepweed series) - This community occurs from sea level to 1600 meters above sea level in habitat that are intermittently flooded or saturated. The soils have a high salt concentration and are usually found on dry lake beds, plains and old lake beds above current drainages. The dominant species in the Alkali Sink community within the affected area is bush seepweed (*Sueada moquinii*) with associated species including four-wing saltbush (*Atriplex canescens*), all-scale saltbush (*Atriplex polycarpa*), alkali heath (*Frankenia salina*), alkali sacaton (*Sporobolus airoides*) and honey mesquite (*Prosopis glandulosa*).

The Pinyon Pine/Juniper Woodland - This community occurs between 1000 to 2800 meters above sea level on alluvial fans, pediments, slopes and ridges in rocky, gravelly well-drained soils. The dominant species is either single-leaf pinyon pine (Pinus monophylla) or Utah juniper (*Juniperus osteosperma*). Associated species may include bitterbrush (*Purshia tridentata*), cliffrose (*Purshia glandulosa*), blackbrush, rabbitbrush species (*Chrysothamnus* sp.), Ephedra species, spiny hopsage and sage species (*Artemisia sp.).*

The Joshua Tree Woodland - This community occurs between 700 meters and 1800 meters above sea level on gentle alluvial fans in colluvial soils. The Joshua tree (*Yucca brevifolia*) is a main component of this community. However, compared to the frequency in which other shrubs and grasses occur in the community, it is almost never a dominant species. Some common associated species within the

community are black bush, rabbitbrush, cheese-bush, goldenbush species (*Ericameria* sp.), ephedra species, winterfat, bladderpod (*Isomeris arborescens*), creosote bush and various cacti species.

The Blackbrush Plant Community (blackbrush series) - This community occurs between 1200 and 1800 meters on alluvial slopes and bajadas in shallow soils that are often derived from a dolomitic, limestone substrate. The blackbrush plant community is dominated almost completely by blackbrush (*Coleogyne ramosissima*) with some associates including Mojave yucca (*Yucca schidigera*), Ephedra species, spiny hopsage and buckwheat species (*Eriogonum sp.).*

Vegetation utilized for forage is affected in a number of ways. Key forage plant species for livestock consumption are palatable species that may be utilized frequently, when available, as forage for livestock. Key forage species that occur in one or more of the plant communities within the allotments are listed below, as identified in AMPs. These include: Ephedra species (*Ephedra* sp.), winter fat (*Kraschenninnokovia lanata*), spiny menodora (*Menodora spinescens*), big galleta *(Pleuraphus rigida),* black grama *(Bouleloua eriopoda*), needle grama (*Bouteloua aristidoides var. aristidoides*), Indian rice grass (*Achnatherum hymenoides*), desert needle grass (*Achnatherum speciosum*), saltbush (*Atriplex spp.*), and bitterbrush (*Purshia tridentata*). These key species can be found in the Mojave Creosote Scrub, Mixed Mojave Scrub, Desert Grassland, Alkali Sink, Joshua Tree Woodland, and Pinyon Pine/Juniper Woodland, and Riparian community types.

Observation of grazing intensity of the key species can provide an indication of the trend in range condition, which is the state of vegetative cover and soils in relation to a standard or predicted condition for a particular ecological site. Forage utilization and the vigor and abundance of key species are mostly impacted around water sources or high-use facilities due to constant soil compaction from trampling and continual cropping of vegetation from cattle and burros. Impacts to resource conditions next to these facilities are expected, and the area impacted will vary in size due to the type of plant community, soil type, weather conditions, nearest like improvement, and lessee's livestock needs. The trend of the adjacent vegetation constantly changes and downward or upward trends are dependent upon past and current use of forage species. In general, trends for vegetative conditions adjacent to facilities tend to be downward with heavy use and grade upward or static as you move farther away from the facility. In allotments which have not been grazed for several years, the trend in vegetation condition surrounding range improvements and areas of past grazing use may have already had a chance to attain an upward or static trend.

Rangeland health assessments completed by interdisciplinary teams and other monitoring studies completed on the allotments including condition and trend have identified the extent livestock grazing is currently affecting vegetation. The assessment teams compared resource conditions to the National Fallback Standards (see Appendix E) and after a review of conditions the team recommended continuation or modification to current grazing management or other practices. These recommendations were finalized with the signing a determination by the Field Office Manager. In 1999 and 2000,

rangeland health assessments were conducted on Ord Mountain, Rattlesnake Canyon, Cady Mountain, Harper Lake, Clark Mountain, Crescent Peak, Jean Lake, Lazy Daisy, Valley Wells, Valley View, Kessler Springs, Lanfair Valley, Horsethief Springs, Piute Valley, and Chemehuevi Valley Allotments.

All Standards were met on the Lazy Daisy, Valley Wells, Clark Mountain, Lanfair Valley, Piute Valley, and Valley View Allotments, but the team needed to return to the allotments during a productive ephemeral year to ascertain the relative amount of non-native species**.** A recommendation from the determination on the Lazy Daisy Allotment would modify the well at Sunflower Spring to reduce or halt overland flow of water from trough and storage tank. In Valley Wells Allotment the determination recommended removing burros until the herd is near management level and fencing Halloran Springs to improve vegetative conditions.

On the Chemehuevi Valley and Horsethief Springs Allotments, one or more Standards were not met but it was determined that cattle grazing was not the cause. Recommendations in the determination include protection of West Well, a reduction of burros to management level, and designate routes for vehicle use in all large washes within the Chemehuevi Allotment. On Horsethief Springs Allotment a small-scale (test area), low intensity prescribed fire along with the exclusion of cattle on an area with an infestation of *Bromus madritensis* ssp. *rubens*.

On the Crescent Peak, Jean Lake, and Kessler Springs Allotments, all standards were met and no recommendations were made to modify current grazing management.

Threatened or Endangered Species

Special-status plant species are provided legal protection under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA). Within the allotments several sensitive plant species occur with varying degrees of sensitivity. The current status given to each plant is from the June 1999 Special Plants List (California Department of Fish and Game; Natural Diversity Database). Presently, some of these populations occur in conjunction with areas of cattle use. Rare, threatened, or endangered plant species within the CDD are listed and shown on page 45 and Map 5 of the CDCA Plan.

Table 6. Federally or State Listed Plants

Common Name	Scientific Name	Location	Status	Allotment
Parish's daisy	*Erigeron parishii*	Low elevation desert pasture along Parten Mine road, and two small populations in the mountain pasture		Rattlesnake Canyon
Cushenberry milkvetch	Astragalus albens	Arrastre Canyon drainage	Endangered	Rattlesnake Canyon
Cushenberry buckwheat	Eriogonum ovalifolium	Arrastre Canyon drainage	Endangered	Rattlesnake Canyon

Table 7. BLM or FWS Species of Special Concern, and California Native Plant Society (CPNS) Status Species

Common Name	Scientific Name	Location	Status	Allotments
Howe's hedgehog cactus	*Echinocerus englemannii* var. *howeii*	Near Bannock, CA.	State of California listed-endangered, and a CNPS List 1B species	Lanfair Valley
Rusby's desert-mallow	*Sphaeralcea rusbyi* var. *eremicola*	Keany Pass and in the Clark Mountain Range	Federal Species of Concern, and a California Native Plant Society (CNPS) List 1B species	Clark Mountain
White bear-poppy l	*Arctomecon merriamii*	Northeast of Keany Pass and in the Clark Mountains	Federal Species of Concern, and a CNPS List 1B species	Clark Mountain
Forked buckwheat	*Eriogonum bifurcatum*	Mesquite Valley and northeast of Keany Pass	Federal Species of Concern, and a CNPS List 1B species	Clark Mountain, Horsethief Spgs.
Kingston Mountains bedstraw	*Galium hilendiae* ssp. *kingstonense*	Higher elevations within the Kingston Mountains	Federal Species of Concern, and a CNPS List 1B species.	Horsethief Spgs.
Utah agave	*Agave utahensis*	Northeast of Piute Valley in the Mescal Range Tecopa Pass, near Crystal Spring, northeast of the Shadow Mountains in the foothills and in the Mesquite Valley	CNPS List #4 "watch" species.	Valley View, Valley Wells, Horsethief Spgs.
Stephens's beardstongue	*Penstemon stephensii*	Southeast of Tecopa Pass and within the Kingston Mountains. Has the potential to occur in the New York Mountains	Federal Species of l Concern, and a CNPS List 1B species.	Horsethief Spgs.
Clark Mountain buckwheat	*Eriogonum heermannii* var. *floccosum*	Keany Pass and the Clark Mountains	CNPS List 4 "Watch" Species	Clark Mountain
Gilman's cymopterus	*Cymopterus gilmanii*	Keany Pass and the Clark Mountains	CNPS List 2 species	Clark Mountain
Yerba desierto	*Fendlerella utahensis*	North of Interstate 15 and south of Interstate 15 in the foothills of the Mescal Range.	CNPS List #4 "watch" species	Clark Mountain, Valley Wells, Valley View
Aven Nelson's phacelia	*Phacelia anelsonii*	North and south on Interstate 15 at Mountain Pass	CNPS List #2 species	Valley View, Valley Wells
Mormon needlegrass	*Achnatherum aridum*	Mesquite Pass	CPNS List 2 species	Clark Mountain
New York Mountains cryptantha	*Cryptantha tumulosa*	North and south of Interstate 15 at Mountain Pass, New York Mountains	BLM Sensitive	Lanfair Valley, Valley View, Valley Wells

Common Name	Scientific Name	Location	Status	Allotments
Small-flowered rice grass	*Piptatherum micranthum*	two small populations in the Kingston Mountains	CNPS List #2 species	Horsethief Spgs.
Crucifixion thorn	*Castela emoryi*	washes or on dry lake beds.	CNPS) List #2 species	
Borrego milkvetch	*Astragalus lentiginosus* var. *borreganus*	west of Nipton, CA.	BLM Sensitive	Kessler Springs
Utah vine milkweed	*Cynanchum utahense*	near Nipton, CA.	CNPS List #4 "watch" species.	Kessler Springs, Jean Lake
Pungent forsellesia	*Glossopetalon pungens*)	Clark Mountains	Federal Species of Concern and a CNPS List 1B species.	Clark Mountain
Death Valley beardstongue	*Penstemon fruticiformis* var. *amargosae*	Near Crystal Spring and within the Kingston Mountains	Federal Species of Concern and a CNPS List #4 "watch" species.	Horsethief Spgs.
Kingston Mountains ivesia	*Ivesia patellifera*	Southeast of Tecopa Pass and within the Kingston Mountains	Federal Species of Concern and a CNPS List 1B species.	Horsethief Spgs.
Foxtail cactus	*Coryphantha vivipara var alversonii*	Whipple Mountains, Vidal Valley	Federal Species of Concern	Chemehuevi Valley
Foxtail cactus	*Coryphantha vivipara var rosea*	New York Mountains, Cima	Federal Species of Concern	Lanfair Valley
Fleabane	*Erigeron lobatus*	Ward Valley	BLM Sensitive	Lazy Daisy
Mojave monkeyflower	*Mimulus mohavensis*	North-central, just east off Camp Rock Rd.	federal species of concern, CNPS List 1B	Ord Mountain
Little San Bernardino Linanthus	*Linanthus maculatus*	Mouth of Rattlesnake Canyon	federal species of concern, CNPS List 1B	Rattlesnake Canyon
Perennial knotweed	*Polygonum fusiforme*	Colorado River	BLM Sensitive	Chemehuevi Valley

B. Environmental Consequences (Vegetation)

Proposed Action

Allotments with Seasonal or Total Exclusion

In those allotments where livestock would be seasonally or totally excluded and climatic conditions

permit, key forage species in some areas would increase in vigor and biomass, seed production and plant germination, which could contribute to an upward trend in range condition. In the long-term, plant community types that have been seasonally, or totally excluded from livestock grazing palatable forage species within the Mojave Creosote Scrub, Mixed Mojave Scrub, Desert Grassland, Alkali Sink, Joshua Tree Woodland, and Pinyon Pine/Juniper Woodland, and Riparian community types could show increased plant density, predictable species composition, increased ground cover, increased biological soil crusts, and more production of seeds. Forage utilization and plant vigor and abundance of key species in areas surrounding range improvements and the main areas of past livestock use would not be impacted by grazing during the interim period. Since upland desert vegetation would take a long time to recover, long trend in range condition is not likely to change during the interim period.

Allotments with Areas Not Excluded

Under the proposed action, in some areas livestock would continue to graze in the areas not excluded. Cattle could affect forage species in that key forage species could show a decrease in vigor and biomass, indicating a short term downward trend in range condition. In the long-term, plant community types could show decreased plant density, increase in less desirable species composition, decreased ground cover, decreased biological soil crusts, and less production of seeds. To maintain plant vigor and biomass and avert downward trends, the maximum forage utilization would be 40 percent or less on current years growth to provide for adequate vegetative cover on these allotments. In addition, a temporary use reduction either before or during the grazing period may be necessary. Future health assessments and monitoring of established photo trend, utilization plots, and nested frequency study plots should also help ensure that trend in vegetation is improved or maintained on the allotments. Future assessments will help identify adverse impacts and determine what management actions need to be implemented.

Threatened or Endangered Species

Under the proposed action populations Perish's daisy would be protected from impacts related to cattle grazing by fencing. Cattle grazing in areas not excluded could affect the other Threatened or Endangered Species but the level of impact is expected to be low.

Special Status Species

Under the proposed action additional impacts to Mojave monkey flower could occur. Know populations of this species would be outside the exclusion area during the critical growing period for this plant. Additional grazing pressure and increase cattle presence (trampling) may occur with habitat for this species. The construction of protective exclosures should be considered. There could be a similar situation with cushenberry's milkvetch and buckwheat because they would also be outside the proposed exclusion areas. Protective exclosure fences have also been planned for these species, but may not be constructed until after the proposed interim period due to priority. Because linanthus habitat in Rattlesnake Canyon is probably the interface between the wash and the steep canyon walls, impact from cattle is probably minimal to non-existent. An inventory of this species would be conducted to determine if any threats exist and to what extent.

Any increased impacts to these plant species from implementing the proposed action would be slight.

Several plants listed above listed in Table 5 and 6 could be affected by the proposed action if they are established in areas not excluded from cattle. These plants are not key forage species, but the affects of the proposed action could be similar to those mentioned in the Areas Not Excluded paragraph above.

Within the Horsethief Springs Allotment, Kingston Mountains bedstraw *(Galium hilendiae* ssp. *kingstonense*), Utah agave *(Agave utahensis),* Forked buckwheat *(Eriogonum bifurcatum),* Kingston Mountains bedstraw *(Galium hilendiae* ssp. *kingstonense),* and Stephen's beardstongue *(Penstemon stephensii)* may be established in areas outside the exclusion. On the Valley Wells Allotment, Utah agave *Agave utahensis* may be established in areas outside the exclusion. On the Lazy Daisy Allotment, Crucifixion thorn (Castela emoryi) may be established in areas outside the exclusion. The level of impact to these plants during the interim period is expected to be slight. Allotment inspections and monitoring would be completed to identify if adverse impacts are occurring and determine what management actions need to be implemented.
Plants listed as occurring within the Clark Mountain Allotment would not be affected. Plants occurring in allotments with total exclusions would also not be impacted.

No Action (current management)
As in the proposed action, levels of vigor and biomass of the key species would remain at current levels. Maintaining allowable utilization levels would ensure that trend in vegetation is improved or maintained. Monitoring would be completed to identify adverse impacts and determine what management actions need to be implemented

Threatened or Endangered Species
Under this alternative, known populations of Parish's daisy within the Rattlesnake Canyon Allotment would be fenced. The construction of the protective exclosures have been planned long before initiation of the proposed action.

Special Status Species
Under the no action alternative, impacts to this species from grazing activities would remain at current levels. The construction of protective exclosures should be considered.

All of the plants listed in table 5 and 6 within active grazing allotment boundaries would continue to have the possibility of being affected by continued livestock grazing. Those occurring within inactive allotments would not be affected.

Alternative 1
The ten allotments listed under this alternative would have the same impacts to vegetation under the No

Action alternative (see Table 4).

Threatened or Endangered Species
Same as the proposed action.

Special Status Species
Same as the proposed action.

References

Terrestrial natural communities have been mapped using the classification used by the California Natural Diversity Database of the Natural Heritage Division in the California Department of Fish and Game (Robert F. Holland, Ph.D., 1986).

INVASIVE, NON-NATIVE SPECIES

A. Affected Environment

The affected allotments contain varying densities of invasive and non-native (alien) species. These species compete with native herbaceous species, especially annual species for available moisture, nutrients, and spacial occupation of available upland habitat. Densities of these species vary widely, and may depend on the amount and timing of winter and spring precipitation for germination. The composition and density of alien plant species are generally considered unacceptable if these alien species could carry a fire. Most alien species are annuals that directly compete with native plants for limited available water during winter and spring. Some alien species initiate germination earlier than native species, although risky, they obtain a jump on species that germinate later.

Red brome (*Bromus madritensisi ssp. rubens*) and schismus (*Schismus arabicus*) are the two most widespread invasive grass species present in the allotments. In addition, several mustard species, as well as filaree *(Erodium spp*) are present at varying densities.

An extensive population of saltcedar *(Tamarix spp.)* exists along the Mojave River at Afton Canyon in the Cady Mountain Allotment, along the Whitewater River in the Whitewater Canyon Allotment. The Afton Canyon population of saltcedar is currently being treated and after multiple years of control efforts , the saltcedar is expected to be eradicated in the next few years.

Small localized populations of saltcedar are established in many riparian areas and canyons throughout the allotments, regardless of whether livestock grazing is occurring. The known extent of saltcedar in the affected allotments has been summarized and prioritized for control treatment sites in each field office jurisdiction, based on the number and kind of threatened and/or endangered species, as well as BLM designated sensitive species, that either occur or have the potential to occur in a particular area, and other site factors.

B. Environmental Consequences

Proposed Action

Seasonal or Total Exclusion

In allotments with seasonal or total exclusion areas, the removal of cattle may result in increased vigor, biomass, plant density, plant cover, and overall seed production for most species in some areas. In total exclusion areas, there may be a slight increase in the competitiveness of native species in the absence of grazing over a larger area. In the interim period there would be no site disturbance by livestock during the critical growing periods for most native species. This would not result in meaningful increases in competitiveness of native vegetation because the interim period is insufficient to allow for such a response. In both situations, the native species would have a greater opportunity to produce and disseminate seed. In the short term, the levels of plant biomass, density, and cover could be increased

to a stage where the vegetation could carry a fire on the more productive sites.

No Action (current management)

Livestock grazing at current levels would be able to indirectly affect non-native plant proliferation through site disturbance of native plant communities. Continued site disturbance would allow non-native plants the opportunity to occupy areas previously occupied by native species. With continued grazing a seed bank could be established, and the competitiveness of the native plant communities could be decreased. Future assessments and monitoring would help identify adverse impacts and determine what management actions need to be implemented.

In the vacant allotments or were grazing is not currently authorized, the impacts of this alternative would be the same as the proposed action.

Alternative 1

On those allotments with areas of seasonal or total exclusion, the benefits to native plant communities would be limited during this interim period. In those allotments identified as not being excluded under this alternative the affects to the native species would be the same as no action. In the Horsethief Springs and Crescent Peak Allotments, the effects to vegetation would be the same as in the no action alternative.

WILDLIFE

A. Affected Environment

Wildlife in Sheep Grazing Allotments

Desert Tortoise. Desert tortoise (*Gopherus agassizii*) is a State and federally listed threatened species. The species ranges from southern Nevada and extreme southwestern Utah, south through southeastern California and southwestern Arizona into northern Mexico. In California, the species occurs in northeastern Los Angeles, eastern Kern and southeastern Inyo counties, and over most of the desert areas of San Bernardino, Riverside and eastern Imperial counties. The species inhabits washes, rocky hillsides, and desert flats having sandy or gravelly soil. Vegetation comprising their habitat includes creosote bush, burrobush, saltbush, Joshua tree, Mojave yucca, and cacti, along with other shrubs, annual grasses, and forbs.

The desert tortoise is a medium-sized tortoise. Males average larger than females and are distinguished by having a concave plastron, longer gular horns, larger chin glands on each side of the lower jaw, and longer tail. Tortoises eat primarily annual forbs and grasses and perennial grasses. Tortoises are above ground primarily in moderate weather in spring (April into early June) and fall (September into early November) depending on latitude, elevation, weather, and other factors. In winter and summer most tortoises are below ground in burrows to avoid the cold or heat, respectively. Common predators include coyotes and common ravens (primarily hatchlings and juveniles). Tortoises may live up to 80 years or more, but mortality of young is very high. Reproductive age is reached at 17-20 years.

Habitat of the species in California has been reduced greatly since the 1920's and is now highly fragmented by urbanization, highways, canals, and other man-made features. Based on data from tortoise permanent study plots), tortoise populations in the western Mojave and Colorado Desert has been declining over the past 20 years. For example, declines at the Desert Tortoise Natural Area and more recently the Chemehuevi Valley have been as high as 90 percent (Berry 2000). The Desert Tortoise Recovery Plan attributed the declines to the cumulative impacts of residential and commercial development, collecting, vandalism (shooting), predation, habitat loss and degradation, and disease (USFWS 1994).

Desert tortoise habitat is present throughout all ephemeral sheep grazing allotments in the CDCA (see Table 1). Designated critical habitat for desert tortoise is found in many of these sheep allotments (see Table 1). Under the Endangered Species Act, *critical habitat* is the area “on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection.” (Endangered Species Act Sec. 3(5)) About 822,952 acres of critical habitat is currently within sheep grazing allotments, and about 784,568 acres of non-critical habitat is in sheep allotments. There are 67,852 acres of non-critical habitat that are subject to grazing by both sheep and cattle (see Table 1). The vicinity map shows the allotments in relation to tortoise critical habitat.

Mohave Ground Squirrel. The Mohave ground squirrel (*Spermophilus mohavensis*) is a State-listed threatened species. Reasons for initial state listing centered around habitat loss and fragmentation as a result of agricultural development, urban development, mineral development, livestock grazing, and recreational vehicle use. Regional population trends are currently unknown.

It has one of the smallest geographical ranges of the 28 species of ground squirrels found in North America. The species is resident in the western Mojave desert, occurring in southwestern Inyo County (from the vicinity of Olancha southward), eastern Kern County (from the vicinity of the town of Mojave eastward) and western San Bernardino County (from Victorville northward and eastward).

The species occupies several vegetative communities within this range, including creosote bush scrub, shadscale scrub, alkali sink scrub, and Joshua Tree Woodland. The diet consists primarily of annual grasses and forbs. The species aestivates in underground burrows about seven months out of the year (usually from August through February) when forage is limited and above-ground temperatures are extreme.

Since its state listing in 1971, a loss of habitat has occurred primarily on private lands due to urban development and agricultural conversion, especially along the Mojave River between Barstow and Victorville, and in several basins and valleys, especially Antelope Valley and Indian Wells Valley. Habitat loss due to urbanization has accelerated in recent years. On Federal lands within its range, the species is affected by off-road vehicles, livestock grazing, mining activities, and other uses.

Mohave ground squirrel potentially occurs in all sheep allotments in the West Mojave affected by the Proposed Action (i.e., Buckhorn Canyon Cantil Common, Goldstone, Gravel Hills, Lava Mountain, Monolith-Cantil, Shadow Mountain, Stoddard Mountain Allotments, and Superior Valley Allotments). Distribution within these allotments (and everywhere else for this species) is spotty, largely unknown, and highly variable from year to year based on forage production, population size (especially the number of yearling ground squirrels), and other factors. Leitner and Leitner (1998) found that the population fluctuates drastically with rainfall which determines forage and then reproduction. In years with poor winter rainfall, there was no reproduction. This and other shrub species are eaten by ground squirrels in early spring and early summer (after the annuals dry up). In those years without annual production, shrubs are critical to the survival of ground squirrels.

BLM California Sensitive Species. In addition to federally and State-listed species (e.g., desert tortoise, Mohave ground squirrel), each BLM State Director designates a list of *Sensitive Species* to be managed in a way to prevent them from becoming State or federally listed. BLM California Sensitive Species which may occur on sheep allotments in the CDCA are described below. Only those occurring in the Rice Valley and Ford Dry Lake sheep grazing allotments are described because sheep grazing is not changing elsewhere under either the Proposed Action or Alternative 1.

Burrowing owl (*Athene cunicularia*) is a small brown owl of open country. The adult is boldly

spotted and barred and has a round head, long legs, and stubby tail. Burrowing owls are found throughout the Mojave and Colorado Deserts. The burrowing owl predominately eats insects and small mammals. Conversion of suitable habitat to agricultural uses and eradication of ground squirrel colonies, the source of nesting burrows, has been a primary reason for the decline of the burrowing owl. (Zeiner *et al*.1990a)

Bendire's thrasher (*Toxostoma bendirei*) is a local spring and summer breeding bird of arid habitats in the southwest. In the CDCA, the species occurs primarily in western San Bernardino County and eastern Riverside County in flat areas with desert succulent scrub or Joshua trees. It potentially occurs in small numbers in all sheep allotments. Migrants appear sometime in February, and the majority leave the breeding area by August. They feed on caterpillars, beetles, other insects, and other invertebrates. Nesting occurs in cholla, yucca, paloverde, thorny shrubs or small trees anywhere from 0.5 to 20 feet above ground. Little life history information is known. Perhaps fewer than 200 breeding pairs remain in California (Remsen 1978). Potential threats to this species include harvesting of Joshua tree and other yuccas, grazing of livestock, urbanization, and off-road vehicle use. (Zeiner *et al*.1990a)

Le Conte's thrasher (*Toxostoma lecontei*) is the palest of the thrashers, with pale gray-brown underparts and a dark tail, bill and eyes. This thrasher runs with surprising speed, tail straight up, across open desert or along sandy washes. This species is exceptionally wary of people (Remsen 1978). Le Conte's thrasher is a widespread, but rare permanent resident of the Southwestern San Joaquin Valley, upper Kern River Basin, Owens Valley, Mojave Desert, and Colorado Desert. (Zeiner *et al*.1990a)

Spotted bats (*Euderma maculatum*) are considered to be one of North America's rarest mammals. The species has been found at a small number of localities, mostly in foothills, mountains, and desert regions in southern California. Occasionally it occurs outside of this range. It may make local movements in some areas, from high elevations in summer to lower elevations in the winter. Little is known about the California population, which may be year-long residents or migratory. Moths are it's principal food. (Zeiner *et al*.1990b)

Townsend's big-eared bats (*Plecotus townsendii)* are distributed throughout the western United States. Recent surveys show marked population declines for this species in many areas of California. A combination of restrictive roost requirements and intolerance of roost disturbance or destruction has been primarily responsible for population declines in most areas. The tendency for this species to roost in highly visible clusters on open surfaces, near roost entrances, makes them highly vulnerable to disturbance. Roost loss in California has usually been linked directly to human activity such as demolition, renewed mining, and entrance closure. The loss of foraging habitat is probably a factor in declines along the Colorado River, where the native floodplain community has been lost to agriculture and tamarisk infestation. (Zeiner *et al*.1990b)

Pallid bats (*Antrozous pallidus*) are known from Cuba, Mexico, and throughout the southwestern and

western United States. The pallid bat is a locally common species of low elevations in California. A wide variety of habitats are occupied, including grasslands, shrublands, woodlands, and forests from sea-level up through mixed conifer forests. The species is common in open, dry habitats with rocky areas for roosting. It prefers rocky outcroppings, cliffs, and crevices with access to open habitats for foraging. It makes local movements to hibernation sites. There is a post-breeding season dispersal. Population trends are not well known, but there are indications of decline. Urbanization, destruction of old buildings, disturbance in caves and old mines, and eradication as a pest are threats to the species. (Zeiner *et al*.1990b)

Nelson's bighorn sheep (*Ovis canadensis nelsoni*) is one of three subspecies of bighorn sheep found in California. This brown to grayish-brown sheep has a creamy white rump and massive coiled horns that spiral back, out, and then forward to complete an arc. It is widely distributed from the White Mountains in Mono County to the Chocolate Mountains in Imperial County. Nelson's bighorn sheep is associated with open, rocky, steep areas containing available water and herbaceous forage. Rutting occurs year-long, peaking in August and September. Lambing season is January to April. This species is threatened by disease, predation, human disturbance, loss of essential habitat, and barriers to movements. (Zeiner *et al*.1990b)

Common animals. Common species of animals occurring in sheep allotments reflect the vegetation communities found in the allotments (see Vegetation, Affected Environment). Woodrats (*Neotoma sp*p.), kangaroo rats (*Dipodomys spp.*), white- tailed antelope ground squirrels (*Ammospermophilus leucurus*), black tailed hares (*Lepus californicus*), kit foxes (*Vulpes macrotis*), and coyotes (*Canis latrans*) are some of the more common animals found on most of the sheep allotments. Common bird species include mourning doves (*Zenaida macroura*), black- throated sparrows (*Amphispiza bilineata*), common ravens (*Corvus corax*), and horned larks (*Eremophila alpestris*). Some common reptiles include the side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus tigris*), gopher snake (*Pituophis melanoleucus*), and the Mojave rattlesnake (*Crotalus scutulatus*).

Wildlife in Cattle Grazing Allotments

Desert tortoise. Information on life history, distribution, and population status for desert tortoise is presented above under Sheep Grazing. Tortoises occur in 23 cattle allotments (all except Round Mountain) altered by the Proposed Action, No Action Alternative, or Alternative 1. See Table 1 for acreage of desert tortoise critical habitat and non-critical habitat in each of these allotments. The vicinity map shows the allotments in relation to tortoise critical habitat.

Mohave Ground Squirrel. Information on life history, distribution, and status for Mohave ground squirrel is presented above under Sheep Grazing.

Of the cattle allotments affected by the Proposed Action or Alternative 1, Mohave ground squirrel occurs in the Cady Mountains, Cronese Lake, Hansen Common, Harper Lake, Lacey-Cactus-

McCloud, Ord Mountain, Pilot Knob, Rudnick Common, Tunawee Common, and Walker Pass Allotments. Distribution within the allotments (and everywhere else for this species) is spotty, largely unknown, and highly variable from year to year based on forage production, population size (especially the number of yearling ground squirrels), and other factors.

BLM California Sensitive Species. Cattle grazing also occurs in the habitat of all Sensitive Species addressed above for sheep grazing allotments. Species accounts are not repeated here. In addition, the following two Sensitive Species occur near portions of allotments to be closed seasonally in the Proposed Action:

Yellow-blotched salamanders (*Ensatina eschscholtzii croceator*) are smooth-skinned with a tail constricted at the base. They are black above with large green- yellow, yellow, or cream blotches. The species occurs only in the Tehachapi Mountains. Habitat for this species includes both deciduous and evergreen forests under rotting logs, bark, and rocks (Stebbins 1985). These salamanders will retreat into rodent burrows or other moist places underground as surface moisture declines in the summer. They forage on a variety of invertebrates including, collembolans, beetles, camel crickets, termites, ants, millipedes, centipedes, and sow bugs. It is found in a few canyons in (e.g., upper Jawbone Canyon) and near (e.g., Upper Lone Tree Canyon) the Rudnick Allotment (Robert Parker, pers. Comm.), but probably all sites are outside of the portion of the allotment to be seasonally closed. Hence, the species will not be affected, and it will not be addressed further. (Zeiner *et al*.1998)

Yellow-eared pocket mouse *(Perognathus xanthonotus)* is restricted to a small area around Walker Pass. In the CDCA, it has been found only in the upper areas of Fremont Canyon (near Walker Pass) and Sand Canyon (Robert Parker, pers. Comm.). However, it may range further north or south. There are few records of the species; it is apparently very uncommon even within its distribution. It occurs in pinyon-juniper, Joshua tree, and chaparral habitats at 4,000-5,000 feet elevation. It prefers gravel slopes with sparse shrub cover. It has no migrational habits and seems to be aggressively solitary. Since known locations are outside of the portion of the allotment to be seasonally closed, the species will not be affected, and it will not be addressed further. (Zeiner *et al*.1990b)

Common animals. Common species of animals occurring in cattle grazing allotments are the same as those described for the sheep allotments.

B. Environmental Consequences (Wildlife)

Proposed Action

Sheep Grazing

The proposed action would exclude sheep grazing from the Ford Dry Lake and Rice Valley Allotments. Grazing use in these allotments occurs only in occasional years in the spring. Heavy winter rains in 2001 indicate that forage may be sufficient to authorize sheep use if either of the operators were to apply. There are no other changes to sheep grazing.

Desert Tortoise. The proposed Action would eliminate sheep grazing from Ford Dry Lake and Rice Valley Allotments in the Colorado Desert; from Goldstone, Gravel Hills, and Superior Valley Allotments in the West Mojave; and from portions (i.e., desert tortoise critical habitat) of Buckhorn Canyon Cantil Common, Lava Mountain, Monolith-Cantil, Shadow Mountain, and Stoddard Mountain Allotments in the West Mojave. However, for those allotments in the West Mojave (i.e., all except Ford Dry Lake and Rice Valley), sheep grazing has not been authorized for seven years or more and will not be authorized in the future due to terms and conditions in the desert tortoise biological opinion for sheep grazing. Therefore, the Proposed Action will have no effect on desert tortoise in those allotments in the West Mojave.

Both Ford Dry Lake and Rice Valley Allotments have low tortoise population density, below 20 per square mile (Berry 1984). The allotments do not include any tortoise critical habitat.

Elimination of grazing would allow for vegetation cover to continue to grow and provide increased shelter for tortoises and increased abundance of food plants. In addition, any negative effects on soil structure (e.g., from hoof action), vegetation condition, cryptogamic crust (e.g., from hoof action), and introduction of exotics (i.e., brought in on trucks and sheep, and encouraged by disturbance of the surface) would be eliminated.

The nature of sheep grazing is that it is relatively intense over a small proportion of the permitted area. This pattern of use can result in competition for forage with hatchling and juvenile tortoises with a limited ability to move out of the sheep-grazed area. Hansen *et al.* (1976) estimated that 15 percent of sheep diet and 52 percent of tortoise diet in the West Mojave was composed of grasses. Nicholson and Humphreys (1981) provided qualitative data on sheep/tortoise diet overlap. The Proposed Action would reduce this potential competition for forage between sheep and tortoises, especially hatchling or juvenile tortoises with small home ranges. The potential for competition is lower in years of abundant forage. But sheep grazing is only permitted in years of more than 200 pounds per acre, and, for these two allotments, has generally been requested only in years greatly exceeding this level.

Sheep can step on tortoises and could injure or kill them. Boarman (1999) cites a number of observations but states that little quantitative data exists on such mortality. A major problem is that smaller tortoises would be the most susceptible to hoof action are the hardest to detect. Tortoises would not have to be crushed to be killed, but merely overturned on a warm day. Small tortoises are extremely sensitive to overheating and could die in the time it would take to turn back over and return to the shade. Small dead tortoises may be quickly picked up by ravens and other predators, leaving no evidence of mortality. While conducting tortoise monitoring, Knowles (FaunaWest 1987) found 11 freshly killed juvenile tortoises after a band of sheep had passed through a portion of the Stoddard Valley permanent study plot. All had been overturned except one. It is unknown how widespread this phenomenon is and what the overall population effects are from having loose bands of sheep, one pass, and other BLM-required grazing protocols. Nevertheless, the Proposed Action would permit hatchlings and juveniles to avoid this source of mortality for the time of the closure with a slightly higher

survival rate for the smaller tortoises. Recruitment into larger class sizes of tortoises would eventually result.

Similarly, sheep can trample tortoise burrows, thereby damaging required thermal or escape cover or even entrapping tortoises. Nicholson and Humphrey (1981) re-examined 164 tortoise burrows before and after sheep grazing and found that 4.3 percent had been totally destroyed and 10 percent had been damaged. Most damaged burrows were in heavily grazed areas (e.g., near watering areas) and were relatively exposed. Most burrows under shrubs escaped damage. Tracy (1966) found that 2.5 percent of 315 burrows were completely destroyed in a sheep-grazed area. After passage of a flock of sheep, Knowles (FaunaWest 1987) found 1 of 11 dead tortoise near a collapsed burrow. The Proposed Action would eliminate this loss of burrows and associated tortoise injury and death in the areas closed to grazing.

The potential for tortoise runovers from sheep delivery trucks, watering trucks, and trucks towing portable housing for sheep herders would also be eliminated.

The elimination of grazing in the Ford Dry Lake and Rice Valley allotments would reduce the effects of grazing on vegetation cover and composition. Sheep potentially reduce overall plant cover. Plant cover is important for tortoises in thermoregulation (e.g., shade) and predator avoidance, especially by hatchling and juvenile tortoises. Gifford and Hawkins (1978) found that grazing reduces soil infiltration rates and water holding capacity and that this correlates with total vegetation present. Grazing may also affect soil temperature, soil chemistry and soil nutrients thereby altering vegetation composition, nutrient value, and size.

Low tortoise densities in ford Dry Lake and Rice Valley Allotments plus the light, sporadic grazing use of these allotments means that removal of grazing would have only a small benefit to desert tortoise. Nevertheless, in summary, the Proposed Action for sheep grazing would positively affect the federally threatened desert tortoise. It would not affect desert tortoise critical habitat.

Mohave ground squirrel. Leitner and Leitner (1998) found that Mohave ground squirrel populations fluctuate drastically with rainfall which determines forage abundance and then reproduction. In years with poor winter rainfall, there was no reproduction. In those years without annual production, shrubs are critical to the survival of ground squirrels.

However, sheep grazing occurs in the West Mojave in spring (usually March through May) only in years when annual forage production exceeds 200 pounds per acre. So, in the years when food is most critical to ground squirrels, sheep grazing is not authorized. That is, although there is potential for competition, sheep grazing only occurs in years of moderate to high annual production. Furthermore, these allotments have not been grazed for seven years or more and will not be grazed due to terms and conditions in the desert tortoise biological opinion for sheep grazing. Therefore, the Proposed Action will have no effect on Mohave ground squirrel.

Sensitive Species.

Burrowing owl. The elimination of grazing from the Rice Valley and Ford Dry Lake Allotments would benefit burrowing owls by promoting natural vegetation and ecosystem processes. More specifically, vegetative vigor and cover would increase providing food and microhabitat for insect prey. In addition, negative effects on soil structure (e.g., from hoof action), cryptogamic crusts (e.g., from hoof action), and introduction of exotics (i.e., brought in on trucks and sheep, and encouraged by disturbance of the surface) would be eliminated, thereby promoting insect prey.

Bendire's thrasher. Same as for burrowing owl.

Le Conte's thrasher. Same as for burrowing owl.

Spotted bat. Same as for burrowing owl.

Townsend's big-eared bat. Same as for burrowing owl.

Pallid bat. Same as for burrowing owl.

Desert bighorn sheep. Desert bighorn sheep inhabit the Palen Mountains immediately north of the Ford Dry Lake Allotment and the Chuckwalla Mountains to the south. The portion of the allotment south of Interstate 10 was eliminated earlier by CDCA Plan amendment to reduce the likelihood of domestic sheep spreading diseases to native bighorn populations in the Chuckwalla Mountains. When the CDCA Plan was prepared in 1980, it was believed that bighorn no longer occupied the Palen Mountains.

Similarly, desert bighorn sheep occupy the Granite Mountains approximately 8 miles west of the Rice Valley Allotment and the Turtle Mountains about 3 miles north or the Allotment. There are permanent demes in both of these mountain ranges.

Under BLM policy stated in the *Mountain Sheep Ecosystem Management Strategy in the 11 Western States and Alaska* (BLM 1995), buffer strips up to 9 miles should be established between domestic sheep and bighorn sheep, except where topographic or other barriers prevent direct contact. (See BLM (1995) for additional details on disease transmission.) Interstate 10 was considered such a barrier between Ford Dry Lake Allotment and the Chuckwalla Mountains. However, no such barrier exists between the Ford Dry Lake Allotment and bighorn populations now present in the Palen Mountains. The Colorado River Aqueduct is above ground in this area and provides a partial barrier between the Rice Valley Allotment and the Turtle Mountains.

Domestic sheep may transmit disease to bighorn sheep when grazing near occupied habitats. These diseases include scabies, chronic frontal sinusitis, nematode parasites, pneumonia, footrot,

parainfluenza-III, bluetongue and soremouth. Such diseases have the capacity to extirpate bighorn sheep (Jessup 1985). Diseases may be transferred by direct contact of animals, sharing of water sources, or the movement of parasitic insects such as bot flies. Contact close enough for disease transmission during spring on this allotment is possible. Individual domestic sheep may transmit disease by straying away from the flock and moving toward occupied bighorn habitats or by the movement of parasitic insects between animals. The presence of domestic sheep on these allotments may adversely impact natural or artificial bighorn sheep restocking efforts if disease transmission occurs (Mulcahy, pers. com. 1999).

The elimination of domestic sheep grazing in the Ford Dry Lake Allotment and Rice Valley Allotment would guard against disease transmission to bighorn sheep and a resulting epidemic that could decimate the Pale Mountains, Granite Mountains, and Turtle Mountains demes and spread to other demes as well.

Common Animals. Same as for burrowing owl. In addition, domestic sheep would not consume forage that other herbivores would eat. Domestic sheep would not trample the burrows of small mammals and reptiles. There would be no disturbance or displacement of wildlife use of an area due to the presence of domestic sheep or sheepherders. Compaction of soil, making vegetation growth and burrow construction more difficult, would not occur.

Proposed Action

Cattle Grazing

Desert Tortoise. In general, cattle grazing can effect tortoises directly (e.g., crushing tortoises or burrows) or indirectly by altering habitat and competing for forage. The elimination of grazing from some areas would result in the following potential effects. Allotment-specific effects will follow the general discussion.

The elimination of grazing would remove competition for forage. Numerous studies have shown an overlap in the diet of cattle and tortoises (Coombs 1979, Sheppard 1981, Medica *et al.* 1982, Avery and Neibergs 1998), and many others have documented food of cattle (e.g., Burkhardt and Chamberlain 1982, Avery and Neibergs 1998) or of desert tortoise (e.g., Woodbury and Hardy 1948, Jennings 1993, Nagy and Medica 1986, Esque 1994). Avery (1998) found that competition for forage (mostly annual grasses and forbs and perennial grasses) occurs in early spring and late spring of years of low rainfall and annual plant production. He found that tortoise foraging (i.e., behavior and food selection) was altered in areas where cattle were present. Tracy (1996) found that in years of low rainfall, and hence annual plant production, cattle grazing may reduce tortoise forage sufficiently to cause tortoises to lay fewer eggs, thereby reducing reproductive potential.

The elimination of grazing would reduce the effects on vegetation cover and composition. Cattle potentially reduce plant cover. Plant cover is used by tortoises for thermoregulation (i.e., shade) and predator avoidance, especially by hatchling and juvenile tortoises. Durfee (1988) found more bare

ground, more introduced plants, and fewer perennial in ungrazed areas along fenced highways. However, Avery (1998) found that the differences are more complex with some plants (e.g., creosotebush) being larger and others (e.g., Galleta grass) being smaller in grazed areas. Gifford and Hawkins (1978) found that grazing reduces soil infiltration rates and water holding capacity and that this correlates with total vegetation present. Other studies have shown the effects of heavy grazing, but grazing intensity in allotments in the CDCA is generally light, except around water sites. Negative effects of grazing on soil temperature, soil chemistry and soil nutrients are possible but more difficult to assess from the literature.

Potentially, cattle can step on tortoises and injure or kill them. The likelihood of this is greater for hatchling or juvenile tortoises that are small and presumably difficult for cattle to see. Similarly, cattle can potentially cave in burrows, thereby disturbing essential thermal cover or even entrapping a tortoise within. Avery (1998), comparing inside and outside of an exclosure, found significantly (statistical) more damaged burrows and found that tortoises spent more nights in the open outside of a cattle grazing exclosure. Although trampling of tortoises and burrows is alleged in many papers, little direct evidence is cited. Nevertheless, the elimination of grazing would relieve these potential effect.

Current management of livestock grazing in the CDCA has not been evaluated over the long term in its impacts to desert tortoises. Short term studies and observations have identified potential conflicts, mainly to the soil (increased compaction and disturbance of cryptobiotic crusts) and vegetation (removal of biomass) and to a much less extent on small tortoises and burrows (Lovich *et al.* 1999). In response to these effects on tortoises, cattle grazing was modified in the early 1990's through terms and conditions in the Biological Opinion; these are given in Appendix A.

Following is a discussion of the impacts based on changes in grazing in specific allotments based on the Proposed Action.

Under the Proposed Action, cattle grazing would not occur on the three ephemeral cattle allotments - Pilot Knob, Piute Valley, and Chemehuevi. However, under the biological opinion for cattle grazing, ephemeral authorizations cannot be made for the Piute Valley on lands managed by BLM (i.e., those portions of the allotment east of the powerline). Therefore, the Proposed Action would have no effect on this allotment. Over the past 10 years, Piute Valley and Chemehuevi have seldom been grazed. Even when grazed, stocking rates on the 137,000-acre Chemehuevi Allotment were less than 25. The lessees for the Pilot Knob and Chemehuevi Allotments have not requested grazing for many years. Based on this, effects of not authorizing use of these three allotments would have no or minimal positive effect on desert tortoise.

Under the proposed action, in the far western Mojave along the eastern slopes of the southern Sierras, a portion of three cattle allotments - Hansen Common, Tunawee Common, and Lacy-Cactus-McCloud - will have cattle grazing removed on a total of 23,300 acres. In addition, Rudnick Common (see Map 9) and Walker Pass (Map 12) allotments will have a spring and late summer closure in

tortoise habitat totaling 63,100 acres. These reductions include most of the tortoise habitat in these five allotments. Tortoise populations are generally low in these areas, and none of it is critical habitat. However, to the extent that they occur, the potential and actual impacts described above would be removed from tortoise habitat.

Under the Proposed Action, there would be no grazing in the following perennial allotments: Crescent Peak, Jean Lake, Lanfair Valley, Whitewater Canyon, and Kessler Springs. These closures include 115,813 acres of desert tortoise critical habitat and 48,770 acres of non-critical tortoise habitat. However, at least on BLM lands, these allotments are currently inactive or vacant. Therefore, there would be no effect of eliminating grazing on these allotments.

Under the Proposed Action, there would be no grazing on 5,779 acres of desert tortoise critical habitat in the Valley View Allotment (see Map 10). Grazing would continue on 26,000 acres of non-critical habitat. The potential and actual impacts described above would be removed from tortoise critical habitat.

Seasonal spring and late summer closures would occur on a portion of nine allotments - Cady Mountain (see Map 1), Cronese Lake (Map 2), Harper Lake (Map 3), Horsethief Springs (Map 4), Lazy Daisy (Map 5), Ord Mountain (Map 6), Pahrump Valley (Map 7), Rattlesnake Canyon (Map 8), and Valley Wells (Map 11). These seasonal closures includes 285,381 acres of desert tortoise critical habitat and 150,181 acres of non-critical tortoise habitat. In addition, some of these allotments have limits on AUM useage. The potential and actual impacts described above would be removed from a portion of these allotments during the seasons when tortoises are above ground. In particular, this would reduce the potential trampling of tortoises and the potential for direct competition for forage.

<u>The Proposed Action for cattle grazing would positively affect the federally threatened desert tortoise and desert tortoise critical habitat.</u>

Mohave ground squirrel. Leitner and Leitner (1998) found that Mohave ground squirrel populations fluctuate drastically with rainfall which determines forage and then reproduction. In years with poor winter rainfall, there was no reproduction. He found some overlap in the food of cattle and ground squirrels, primarily winterfat in the northern part of the range. Winterfat and other shrub species are eaten by ground squirrels in early spring and early summer (after the annuals dry up). In those years without annual production, shrubs are critical to the survival of ground squirrels.

Hence, there is good potential for competition between Mohave ground squirrel and cattle. Mohave ground squirrel occurs in the Rudnick Common, Tunawee Common, Walker Pass, Hansen Common, Lacey-Cactus-McCloud, Cady Mountains, Cronese Lake, Ord Mountain, Harper Lake, and Pilot Knob Allotments. The last (Pilot Knob) is currently not grazed. The reductions in grazing proposed in the Proposed Action would eliminate competition, if any, on affected portions of Hansen Common, Lacey-Cactus-McCloud, and Tunawee Common Allotments. Reductions in season of use on Cady

Mountain (see Map 1), Cronese Lake (Map 2), Harper Lake (Map 3), Ord Mountain (Map 6), Rudnick Common (Map 9), and Walker Pass (Map 12) Allotments would reduce competition, if any, on affected portions of those allotments.

Sensitive Species.

Burrowing owl. The elimination of cattle grazing seasonally or from all or portions of cattle grazing allotments as described in the Proposed Action would benefit burrowing owls by promoting natural vegetation and ecosystem processes. More specifically, vegetative vigor and cover would increase providing food and microhabitat for insect prey. In addition, negative effects on soil structure, infiltration, chemistry, and temperature; on cryptogamic crusts; and spread of exotic plants would be eliminated, thereby promoting insect prey.

Bendire's thrasher. Same as for burrowing owl.

Le Conte's thrasher. Same as for burrowing owl.

Spotted bat. Same as for burrowing owl.

Townsend's big-eared bat. Same as for burrowing owl.

Pallid bat. Same as for burrowing owl.

Desert bighorn sheep. Cattle potentially affect bighorn sheep by competing for forage, by altering the vegetation composition, by introducing diseases, by fouling or disrupting use of water sources, or by causing changes in behavior or habitat use. A variety of papers (Bodie and Hicks 1980, Dodd and Brady 1986, Cunningham and Ohmart 1986, Ganskopp and Vavra 1987, Ganskopp 1983, King and Workman 1984, Kornet 1978, McCullough *et al.* 1980, McQuivey 1978, and Wehausen and Hansen 1986) dealing with livestock impacts have given mixed results; McCarty and Baily (1994) summarized what was known on the subject up to 1994.

Wehausen and Hansen (1986) studied competition between bighorn sheep and cattle in the East Mojave. They found that there was a spatial separation. Bighorn sheep, especially ewes, used mostly water sources not used by cattle. Cattle reportedly trampled and overgrazed vegetation around waters, fouled the water with mud, feces, and urine, and dominated the site through long-term attendance. Nevertheless, they concluded that spatial separation was most likely due to differences in habitat preferences between bighorn sheep and cattle rather than avoidance of cattle by bighorn. He later (Wehausen 1990) found an instance in the Old Woman Mountains where cattle had so severely degraded a natural spring that bighorn use was terminated.

Citing Wehausen (1988) and Clark *et al.* (1985), Bleich *et al.* (1990) asserted that the Old Woman

Mountains deme had been "depressed during the 1980s, possibly because of a high prevalence of cattle disease." They stated that augmentation of the Iron Mountains deme, immediately south of the Old Woman Mountains, was not attempted because diseased bighorn sheep occasionally move south into the Iron Mountains. They emphasized the hazard of transmission of disease from cattle to bighorn sheep in movement corridors, also. Jessup (1985) asserted that cattle may the source of most diseases of bighorn sheep; he concluded that "at present, the best management strategy is to maintain bighorn herds at optimal nutritional planes, at or below carrying capacity and as widely separated as possible from domestic livestock."

Wehausen (1988) found that cattle disease in the Old Woman Mountains had its greatest effect in excessive lamb mortality, which could lead to long-term declines in the population. He found that population declines were broken during droughts when populations of gnats, the transmission vectors for bluetongue and epizootic hemorrhagic disease, were low.

The closures of all or part of allotments and seasonal closures of some allotments are generally outside of permanently or seasonally occupied habitat (i.e., mountainous areas) for bighorn sheep. Exceptions are the Ord Mountain, Cady Mountain, and Whitewater Canyon Allotments. In addition, where bighorn cross lowland areas between mountain ranges, there may be some positive effect of removal of cattle due to the reduced potential of disease transmission. The Whitewater Canyon Allotment is currently in rest; therefore, there would be no effect of removing grazing in that allotment. The seasonal closure of cattle grazing in portions of Ord Mountain (see Map 6) and Cady Mountain (Map 1) Allotments would reduce competition for forage, allow restoration of plant vigor, lower opportunity for disease transmission, and allow for an improvement of water conditions at springs.

The removal of cattle from portions of the Lazy Daisy Allotment would likely result in increased impacts on bighorn sheep as cattle are concentrated in the remaining, higher elevation portions of the allotment in the Old Woman Mountains where bighorn sheep reside. Effects would include increased competition for forage, reduced plant vigor, increased opportunity for disease transmission, and increased degradation of some springs.

Overall, primarily for the negative effects on the Old Woman Mountains deme, the elimination of cattle grazing under the Proposed Action would likely be negative for bighorn sheep.

Common Animals. Same as for burrowing owl. In addition, cattle would not consume forage that other herbivores might eat. Cattle would not trample the burrows of small mammals and reptiles. There would be no disturbance or displacement of wildlife use of an area due to the presence of cattle. Compaction of soil, making vegetation growth and burrow construction by rodents, lizards, and snakes more difficult, would not occur.

No Action (Current Management)

Sheep Grazing

Impacts to desert tortoise, other BLM California Sensitive Species, and more common animals would continue. The beneficial impacts described for the Proposed Action would not occur.

Desert Tortoise. Following is a summary of the impacts on desert tortoise that would continue in the Ford Dry Lake and Rice Valley Allotments.

The Desert Tortoise Recovery Plan (1994) provides a summary of the impacts of sheep grazing to desert tortoise and their habitat:

> "Sheep...can affect desert tortoises and their habitat directly or indirectly. The degree of impact depends on... resiliency of soil and vegetation, stocking rates, and season of use. (Sheep) can trample, injure, or kill desert tortoises either above ground or while in burrows. (Sheep) can also trample burrows and other cover sites. Juvenile tortoise burrows are particularly vulnerable to trampling because of their locations and the shallow soil covering protecting the tunnels. (Sheep) can also trample shrubs (e.g., creosote) used as sites for tortoise burrows and pallets, and which provide protection from predators and temperature extremes. (Sheep) grazing can affect quality and quantity of plant foods available for desert tortoises, and thereby affect nutritional intake. In some areas, (sheep) preferences are clearly for native plants over weedy non-natives. The most substantial impacts to vegetation, soils, and desert tortoises likely occur at and in the vicinity of heavy-use sites where sheep are watered, bedded down, or trailed. Loss of cover can increase vulnerability of desert tortoises to predation" (USFWS 1994).

By consistently applying the terms and conditions from the USFWS Biological Opinion 1-8-94-F-16, negative impacts to tortoise are greatly reduced. Limiting bands to 1,000 adult sheep, allowing only one pass through an area per season, grazing in loose patterns, and changing bedding and watering sites daily ensures that impacts to tortoise habitat in any one area are not sustained and allowed to cause substantial damage to tortoise habitat. Monitoring the use of perennial plants by sheep will ensure that the grazing season does not last beyond the proper season of use as indicated by sheep switching from ephemeral to perennial forage. It's unknown what percentage of sheep herders follow the guidelines, and there is no data on actual grazing practices. BLM does monitor compliance of the terms and conditions, but, with 30 to 40 bands in some years, it is not possible to achieve complete coverage.

Bighorn Sheep. The possibility of transmission of a variety of diseases from domestic sheep which are grazing in the Ford Dry Lake Allotment and Rice Valley Allotment to desert bighorn sheep demes in nearby mountain ranges (i.e., Palen, Granite, Turtle Mountains) and then to other nearby demes would continue. The result could be the extirpation of demes in adjacent areas. The continuation of grazing in the Ford Dry Lake Allotment would violate BLM Guidelines (see Appendix C). Since the Turtle Mountains are separated from the Rice Valley Allotment by the Colorado River Aqueduct, a barrier to domestic sheep movement, the BLM Guidelines would not necessarily be violated.

Other Sensitive Species and Common Animals. Impacts of sheep grazing on these species are generally described under the Proposed Action. These impacts would continue. However, specific interactions between these species and domestic sheep are not known. Effects on species populations in response to habitat changes have not been studied for most of these species.

Cattle Grazing

Desert Tortoise. The reductions in impacts described above for the Proposed Action would not occur. This Alternative would have no affect on desert tortoise or its critical habitat.

Bighorn Sheep. The impacts of cattle grazing on bighorn sheep would not change.

Other Sensitive Species and Common Animals. Impacts of cattle grazing on these species are generally described under the Proposed Action. These impacts would continue at present levels. .

Alternative 1

Sheep Grazing

Impacts would be as described above for the Proposed Action for the Ford Dry Lake Allotment, where grazing would be eliminated on 49,682 acres. Impacts would be as described above for the No Action Alternative for the Rice Valley Allotment (85,565 acres), which would remain active.

Cattle Grazing

The nature of the impacts would be similar to those described for the Proposed Action. Compared to the Proposed Action, this alternative would reduce the acres of positive impacts on desert tortoise as follows:

Closures of ephemeral allotments: Same reductions in grazing.

Closures of portions of southeastern Sierra allotments: Reduced from 23,300 acres of non-critical tortoise habitat (Hansen Common, Lacy-Cactus McCloud, Tunawee Common) in the Proposed Action to 18,000 acres of non-critical habitat (Lacy-Cactus-McCloud) in Alternative 1.

Seasonal closures of portions of southeastern Sierra allotments: Reduced from 63,100 acres in tortoise non-critical habitat (Rudnick Common, Walker Pass) in the Proposed Action to 0 in Alternative 1.

Closures of other perennial allotments: Reduced from 115,813 acres of tortoise critical habitat and 48,770 acres of non-critical habitat (Crescent Peak, Jean Lake, Lanfair Valley, Whitewater Canyon, Kessler Springs) in the Proposed Action to 115,790 acres of critical habitat and 41,923 acres of non-critical habitat (Jean Lake, Lanfair Valley, Whitewater Canyon, Kessler Springs) in Alternative 1.

Seasonal closures of portions of other allotments: Reduced from 285,381 acres of tortoise critical habitat and 150,181 acres of non-critical habitat (Cady Mountain, Cronese Lake, Harper Lake, Horsethief Springs, Lazy Daisy, Ord Mountain, Pahrump Valley,

Rattlesnake Canyon, Valley Wells) in the Proposed Action to 285,381 acres of critical habitat and 5,120 acres of non-critical habitat (Cronese Lake, Harper Lake, Lazy Daisy, Ord Mountain, Valley Wells) in Alternative 1.

Overall, this alternative would have more impact on common animals and Sensitive Species than the Proposed Action, but it would positively affect the federally threatened desert tortoise and desert tortoise critical habitat.

Consultation

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WILD HORSES AND BURROS

A. Affected Environment

The Valley Wells Allotment is located within the Clark Mountain Herd Management Area (HMA). The current population estimate is 159 burros within the HMA. There were 159 burros removed during the last burro gathering between May and June 1999. The appropriate management level for Clark Mountain HMA is 44 burros and their forage allocation 371 AUMs within the Valley Wells Allotment. Since one burro is estimated to consume 0.7 of an animal unit month and there are an estimated 159 burros within the allotment, approximately 1,336 AUM's are estimated to be consumed by burros per year. Management conflicts about forage use from cattle and excessive burros continue within the Valley Wells Allotment. Burros utilize natural and developed sources of water sources within the Valley Wells Allotment. A gather plan has been prepared and a burro gather is being proposed for late April 2001.

B. Environmental Consequences

Proposed Action
If the lessee determines it is necessary to turn developed waters off in the Valley Wells Allotment to keep cattle out of the excluded areas in Shadow Valley, burros would be deprived of some of their usual water sources. This action would force burros to search for alternative water sources located on the Mojave National Preserve or to search for water elsewhere in the HMA. This may increase the concentration of burros at certain water sources.

No Action
Burro distribution and water availability would continue at current levels.

Alternative 1
Impacts are similar to the no action alternative.

SOILS

A. Affected Environment

Soil surveys have not been conducted in the affected allotments. While Order III surveys are not available, general soils data does exist for most allotments and is available at the respective field offices.

Erosion potential of most soils associated with the subject allotments usually range from slight to moderate. There are no identified accelerated erosion problems on the allotments where livestock grazing is considered the primary cause. Unnatural soil compaction has been identified at livestock watering and holding facilities.

BLM assessed many the cattle allotments in 1998 through 2000 to determine if the rangeland health standards were being achieved (see Table 2). Specific soil standards are related to permeability and infiltration. With the exception of the Whitewater Canyon Allotment, all allotments examined were found to achieved the standards for soils.

B. Environmental Consequences

Proposed Action
Any potential impacts to the soils resource from the construction of range improvement required to implement the proposed action would be analyzed in separate, site specific environmental documents. However, impacts to the soil resource from the construction of these project would be minimal. Compaction at livestock facilities would remain during the interim period because there is insufficient time for natural processes to reverse soil compaction.

No Action (current management)
Same as proposed action.

Alternative 1
Same as proposed action.

WATER QUALITY, SURFACE AND GROUND WATER

A. Affected Environment

The Mojave River courses through the northern portion of the Cady Mountain Allotment and is currently on the States 303d list of impaired bodies. The Whitewater River runs through the southern portion of the Whitewater Canyon Allotment. The Round Mountain Allotment contains two perennial streams. Most of the cattle allotments contain naturally occurring springs, most of which have been developed with the primary purpose being stockwater. Several of the cattle allotments contain at least one well. The Pahrump Valley Allotment contains four reservoirs that collects and holds water seasonally.

Limited water quality monitoring has been conducted on most developed and undeveloped springs occurring in cattle allotments managed by the Barstow Field Office. Because of on-going saltcedar controls efforts which use herbicide along the Mojave River, a more intensive water quality monitoring program has been established.

B. Environmental Consequences

Proposed Action

Although a riparian exclosure fence is in place around surface flows of the Mojave River within the Cady Mountain Allotment, two water gaps exist within he exclosure fence. These water gaps allow cattle access to surface water at confined locations along the Mojave River. These two water gaps are points along the river where water quality is degraded. The effects to water quality include increased water temperature, increased turbidity, increases in sedimentation transport, decreases in dissolved oxygen, and the introduction of fecal coliform. The total exclusion of livestock from the Mojave River as stated in the proposed action would greatly improve the water quality of that portion of the Mojave River within the allotment.

Although most developed springs have water piped away from the source, along a pipeline to a trough, water quality generally remains acceptable for use by wildlife, however impacts to water quality occur with maintenance problems, or improper development design. The construction of riparian exclosure fence around the source of each developed spring, as required in the proposed action for several cattle allotments would improve water quality, decrease soil compaction and eventually improve soil permeability in the areas adjacent to these spring sources by ensuring that poor maintenance or project design does not adversely affect water quality. Water quantity concerns related to the prolonged “de-watering” of these springs would be decreased with the installation of floats or other regulatory devices which only allows a portion of the water produced at spring to flow out to a trough. The Mojave Water Agency classifies stockwater wells as “minimal producers” with nominal impacts to ground water supplies and availability.

No Action (current management)

Under the alternative, the development of Nine Mile Waterhole and the construction of riparian exclosure fence would still occur. These projects have been planned for long before the settlement agreement was finalized. The benefits to water quality and quantity from these developments are the same as discussed under the proposed action for this interim period. Under this alternative any on-going impacts to water quality would continue on those allotments where developments to enhance water quality has not been planned for in this interim period. Under this alternative a riparian exclosure fence would still be constructed to protect riparian vegetation in Rattlesnake Canyon.

Alternative 1

Same as the proposed action and the no action for those allotments with and without exclusions. Under this alternative a riparian exclosure fence would still be constructed to protect riparian vegetation in Rattlesnake Canyon. Water control and riparian exclosure fences would still be constructed in the Ord Mountain Allotment, and the riparian exclosure fence along Kelso Creek would still be constructed.

WETLANDS/RIPARIAN ZONES

A. Affected Environment

The wetland plant community type is found adjacent to seeps and springs that occur in the Mojave Desert between sea level and 2100 meters above sea level. If the soils are permanently saturated, habitat for wetland emergent species may include *Anemopsis californica*, *Scirpus sp.*, *Typha domingensis*, *Carex sp.*, and *Juncus* sp.). Associated wetland shrubs and trees may include Fremont cottonwood (*Populus fremontii*), black willow (*Salix gooddingii*), *Baccharis* sp., and arrow weed (*Pluchea sericea*).

Riparian habitat, seeps and springs occupy small portions of the allotments yet most wildlife species, wild burros and domestic livestock depend on these areas for food, water, and/or shelter Some water sources associated with riparian areas on the allotments have been developed under cooperative agreements or rangeland improvement permits with the lessees. Some of these habitats have had water from the seeps or springs piped away to troughs or storage tanks to provide water to livestock, wildlife and burros. Many springs are also being utilized in their natural state. Some of these springs contain varying densities of highly degraded or completely eliminated riparian/wetland vegetation at the sources, where the source has not been fenced.

As described in the Vegetation Section, rangeland health assessments and other monitoring studies have been completed by interdisciplinary teams on some allotments. These assessments included an assessment of riparian areas, where present. The assessment teams compared resource conditions to the National Fallback Standards (see Appendix E), and BLM's proper functioning condition analysis standards and after a review of conditions the team recommended prescribed actions if needed. These recommendations were finalized with the signing a determination by the Field Office Manager and are in various stages of implementation.

The Mojave River at Afton Canyon and Whitewater River in the Whitewater Canyon Allotment contain extensive populations of riparian vegetation. The two perennial streams located in the Round Mountain Allotment also contain extensive populations of riparian vegetation. Most riparian/wetland areas occurring in this allotment have been assessed as functioning at risk or non-functioning under BLM's proper functioning condition analysis standards.

Environmental Consequences

Proposed Action

In allotments where livestock would be seasonally or totally excluded, there could be a positive affect to riparian/wetland vegetation from the implementation of the proposed action. Where riparian areas are located within the excluded areas, the seasonal and total exclusions of livestock would allow riparian/wetland vegetation rest during the critical growing periods for those species. If riparian/wetland

vegetation is rested during the interim period, a slight increase in trend is expected Where not already in place, riparian exclosure fences would need to be constructed in several cattle allotments to protect riparian/wetland vegetation, including the development of Nine Mile Waterhole and an associated riparian exclosure fence, to facilitate the exclusions by protecting riparian areas during this interim period. Compliance inspections and monitoring would be completed on other riparian areas outside of the excluded areas to identify if adverse impacts are occurring and determine what management actions need to be implemented. Finalized rangeland health assessment recommendations would continue to be implemented.

No Action (current management)

Under this alternative, the development of Nine Mile Waterhole and the construction of riparian exclosure fence would occur the same as the proposed action, and the benefits to riparian/wetland habitat from these developments are the same as discussed under the proposed action for this interim period. Impacts from cattle grazing to riparian/wetland habitat would continue on those allotments where developments to protect habitat are not in place. Allotment inspections and monitoring would be completed in riparian areas to identify if adverse impacts are occurring and determine what management actions need to be implemented. Finalized rangeland health assessment recommendations would continue to be implemented.

Alternative 1

Same as the proposed action in those allotments with exclusions and similar to the no action where it applies.

CULTURAL RESOURCES

A. Affected Environment

The affected environment for the respective cultural resource concerning the 42 grazing allotments is available at Ridgecrest, Palm Springs, Barstow, and Needles Field Offices. For a quick review of the Cultural Resources Program please see Cultural Resources Element in the CDCA Plan. This environmental assessment recognizes the need for additional environmental assessment prior to construction of range improvements.

California BLM has explicit responsibility to manage cultural resources on public lands consistent with applicable procedures and agreements. Background site record and literature review would be conducted as a minimum level of review as part of the ongoing lease renewal environmental assessment, changes in management, and installation of rangeland improvements. Present inventory would focus on known or suspected areas of historic ground disturbing activities associated with livestock grazing such as water sources, corrals, supplemental feeding areas, bedding areas, salt stations, cattle guards, and fence. The results of this analysis would be used to modify grazing leases. If cultural resources are identified under an existing grazing lease, the stipulations of the grazing lease should be modified to comply with the Bureau's responsibility to manage cultural resources.

All cultural resource sites would be subject to review and evaluation for listing in the National Register of Historic Places. Pursuant to California protocol cited above, supporting documentation would be submitted to the California Office of Historic Preservation for review and concurrence to be submitted to the Keeper of the National Register. All cultural resources would be afforded protection consistent with law and policy, including appropriate mitigation measures.

B. Environmental Consequences

Proposed Action
Any impacts to cultural resources from the construction of range improvements required to implement the proposed action would be analyzed in separate, site specific EA's. However, impacts to cultural resources from the construction of range improvements should be minimal.

No Action (current management):
Same as Proposed action

Alternative 1
Same as Proposed action

ENVIRONMENTAL JUSTICE

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and low income Populations, directs Federal Agencies to identify and address the potential for their activities to cause disproportionately high or adverse impacts to minority or low income populations. This proposal does not present the potential for substantial adverse impacts to human health. Currently the lessees are not a minority or considered low income in relation to the population as a whole or regionally. This element will not be further addressed in this document.

FARMLANDS, PRIME or UNIQUE

There are no prime or unique farmlands within the Allotment. This element will not be further addressed in this document.

FLOOD PLAINS

In general, summer thunderstorms deliver low amounts of rainfall in intense bursts which occasionally results in flash flooding. Stream (washes) within the area of the Allotment are ephemeral and flow only in direct response to precipitation. This element will not be further addressed in this document.

NATIVE AMERICAN CONCERNS

The allotments are located within the traditional territory of several Native American Tribes. Native American coordination/consultation has been initiated to ascertain if there are traditional or religious concerns that may be affected.

WASTE, HAZARDOUS OR SOLID

Motorized vehicles and equipment are currently used in the grazing allotments and water may be pumped using windmills or hauled in trucks and small generators or battery powered pumps may be used which could be affected by breakdowns or vandalism to equipment. Past use of motorized vehicles and equipment has undoubtedly resulted in the occasional small spill/release of fuel and/or petroleum products on access roads and work sites. Petroleum products and antifreeze (Ethylene Glycol) releases from leakage and accidents involving vehicles used to maintain range improvements is a possibly consequence. The level of such spills/releases is unknown, but suspected to be small.

WILD AND SCENIC RIVERS

Stream (washes) within the allotments are ephemeral and flow only in direct response to precipitation. This element will not be further addressed in this document.

VISUAL RESOURCES

This action would not add new visual impacts or increase the contrast of existing facilities such as water developments, salt licks, and corrals, to the present landscape. Continued range improvements would not add new visual impacts or increase the contrast of existing facilities to the present landscape. New range improvements that would be constructed would be evaluated on a site specific basis for visual intrusions.

RECREATION

Recreation use is generally dispersed within the allotments and activities include off highway vehicle (OHV) touring, dual sport rides, sightseeing along highways, equestrian use, hiking, camping, and big & small game hunting, and rock collecting. Estimated annual use levels in the allotment are varied. Overall, impacts to recreation visitors will be very low due to low visitor use levels. It would require several years of appreciable changes to be noticeable by the repeat visitor.

LAND USE

Various Multiple Use classes are used on the allotments. The region of Multiple-Use Classes M provides for a wide variety of present and future uses such as mining, livestock grazing, recreation, energy, and utility development. Class M management is also designated to conserve desert resources and to mitigate damage to those resources which permitted use may cause. The region of Multiple Use Class L (Limited Use) protects sensitive, natural, scenic, ecological, and cultural resource values. These lands are managed to provide for generally lower intensity, carefully controlled multiple use of resources, while ensuring that sensitive values are not significantly diminished. The region of Multiple-Use Class M (moderate use) public lands are blanketed by mining claims and long term continued mining.

Evaluation of Emergency Conditions

The BLM has evaluated 42 allotments to determine whether conditions warrant emergency action in accordance with 43 CFR 4110.3-3 (b). BLM has determined that conditions, while serious, do not constitute an emergency at this time. Continued grazing does not pose an "immenent likelihood of seignificant resource damage" to soils, wildlife habitat, vegetation, and other critical values in the 42 allotments. The BLM has been actively involved in modification of grazing practices since 1991 that has led to improved conditions for the desert tortoise and its habitat over many these allotments. The proposed action would be an additional step to alleviate resource damage from continued livestock grazing.

CHAPTER 4: CUMULATIVE IMPACTS

Resource conditions are being affected by grazing, in addition to OHVs, mining and other activities. These effects of other activities have been described in other BLM reports including applicable BOS, NEMO, and NECO. The affects analysis will not be repeated below.

Proposed Action

The cumulative impacts of the proposed action would slightly improve existing resource conditions for the desert tortoise and other species. As a result of this slight improvement, the proposed action would partially offset adverse impacts from OHVs, mining and other activities in the region. Most of this improvement would occur in desert tortoise habitat in 15 cattle allotments and 2 sheep allotments. The remaining allotments would not likely experience improvement in resource conditions.

The cumulative impact of reducing sheep and cattle grazing on these 42 allotments would be to increase the amount of available forage and cover for wildlife species. In The trampling of burrows, disturbance, direct mortality, and injury to smaller animals such as juvenile tortoises, lizards, snakes, and various insects would be reduced. Reductions in grazing would promote natural vegetation and ecosystem processes. More specifically, vegetative vigor and cover would increase providing food and microhabitat for many species. In addition, negative effects on soil structure, cryptogamic crusts, introduction and spread of exotic plants would be reduced. The opportunity for transmission of disease to bighorn sheep would be decreased in some allotments (i.e., Ord Mountain and Cady Mountain Allotments) during the seasonal closures but would be increased in the Lazy Daisy Allotment (Old Woman Mountains).

No Action Alternative (current management)

The cumulative impacts of the no action would slightly improve existing resource conditions for the desert tortoise and other species. As a result of this slight improvement, the no action would partially offset adverse impacts from OHVs, mining and other activities in the region. Twelve allotments in critical habitat would show gradual improvement as a result of implementing the BO while resource

conditions of non-critical desert tortoise habitat in the remaining allotments would not substantially change.

Alternative 1:

The cumulative impacts of alternative 1 would slightly improve existing resource conditions for the desert tortoise and other species. As a result of this slight improvement, alternative 1 would partially offset adverse impacts from OHVs, mining and other activities in the region. However, there would not be a measurable difference between the no action alternative. Anticipated improvement would occur in allotments with critical habitat.

FINDING OF NO SIGNIFICANT IMPACTS

Finding of No Significant Impact: I have reviewed the analysis of potential environment impacts of the proposed action and alternatives described in the environmental assessment. I have determined the impacts are not significant, and an environmental impact statement is not required.

Discussion: This analysis is for a short term action. The BLM is currently developing long-term management strategies for the allotments as described in the draft NECO and NEMO Plans. These drafts plans were released to the public in March and April of 2001. Approval of these plans will establish long-term grazing management prescriptions in desert tortoise critical habitat. An environmental impact statement is being prepared for these two land use planning efforts.

Approved: /s/ Bruce Shaffer 4/9/01

(Acting) District Manager Date

APPENDICES

APPENDIX A- Maps

Map 1. Cady Mountain Allotment
Map 2. Cronese Lake Allotment
Map 3. Hansen Common Allotment
Map 4. Harper Lake Allotment
Map 5. Horsethief Springs Allotment
Map 6. Lazy Daisy Allotment
Map 7. Ord Mountain Allotment
Map 8. Pahrump Valley Allotment
Map 9. Rattlesnake Canyon Allotment
Map 10. Rudnick Common Allotment
Map 11. Tunawee Common Allotment
Map 12. Valley View and Kessler Springs Allotments
Map 13. Valley Wells Allotment
Map 14. Walker Pass Allotment

APPENDIX B- Terms and Conditions From Sheep and Cattle Biological Opinions

APPENDIX C- Guidelines for Bighorn Sheep

APPENDIX D- List of Preparers

APPENDIX E- National Fallback Standards and Guidelines for Grazing Management

Appendix A
Maps

Map1

Map 2

Map 3

Map4

Map 5

Map 6

Map 7

Map8

Map 9

Map 10

Map 11

Map 12

Map 13

Map 14

APPENDIX B
Terms and Conditions From Sheep and Cattle Biological Opinions 1/

Sheep Allotments

1. Turnout shall not occur until production of 200 pounds (air dry weight (ADW)) per acre of ephemeral forage is available. The lessee shall be remove the sheep from the area or the entire allotment if production falls below 200 pounds ADW per acre.

2. No grazing is authorized except as approved through grazing application. All herders shall have a copy of the current use authorization in their possession and a copy posted at the camp site. When trailing, all herders shall be required to have a copy of the current trailing authorization.

3. Sheep are to graze in a scattered or loose pattern.

4. Grazing use is limited to one pass per season at a given location which would be identified by physical evidence at the site.

5. Sheep bedding and watering sites shall be changed daily. New bedding or watering sites are to be at least ¼ mile from any previous sites. Sheep are to be watered on or adjacent to existing dirt roads (within 25 feet) unless an existing disturbed or open area cleared of shrubs from past uses can be used.

6. Stopping and parking of vehicles, and vehicular camping along routes of travel would be limited to within 50 feet of all routes in multiple-use Class “L” and ”M” as described in the California Desert Conservation Area Plan.

7. A camp site or camp trailer shall not remain in the same location for more than seven days. A new camp location shall be at least one mile from any previous camp location. To eliminate scavenging by ravens and other predators of desert tortoise, trash and garbage shall be removed from each camp site each day and no trash or garbage shall be buried at the camp site. All sheep carcasses within 300 feet of a road shall be removed. Carcasses are to be removed from anywhere in the open area and permission is required to remove dead sheep found within a wilderness.

8. Within 15 days of the close of the authorized grazing period, the lessee shall submit a BLM-supplied map delineating areas of grazing use within the allotment.

Cattle Allotments

1. Within key areas, utilization shall be limited to between 30 and 50 percent of key forage species. In desert tortoise habitat, utilization of key perennial grasses shall not exceed 40% from February 15 to October 14. No averaging of utilization levels among key species or key areas shall occur. When utilization approaches authorized limits in any key area, steps shall be taken to redistribute or reduce cattle use of that key area. These steps shall include removal of cattle or, where feasible, turning off water at troughs to reduce adjacent grazing.

2. Cattle shall be evenly dispersed throughout their area of use, and herding shall be limited to shipping and animal husbandry practices. Grazing use shall be managed according to grazing regulations, allotment management plans, CDCA Plan, and current biological opinions. All individuals and groups implementing activities in desert tortoise habitat shall be briefed about the status of desert tortoise and protection measures instituted to reduce potential impacts to the habitat and animal. Grazing use will be managed to improve trends for native perennial and annual plants where site potential permits. Feeding of roughage, such as hay, hay cubes, or grains to supplement forage quantity, is not allowed. Grazing shall be curtailed to protect perennial plants during severe or prolonged drought.

3. All cattle carcasses found within 300 feet of any road shall be removed and disposed of in an appropriate manner, and no prior notification to the BLM is necessary if off-road vehicle use is required, but permission from the authorized officer is required to remove animals within wilderness.

4. Authorization for ephemeral forage in Category III desert tortoise habitat shall occur when 200 pounds of air dry-weight per acre or more of ephemeral forage is available. Any replacement cattle authorized to use ephemeral forage shall be removed from such allotments whenever the thresholds for curtailing ephemeral grazing are reached. Temporary, non-renewable perennial forage above permitted use in Category III habitat, temporary, non-renewable forage shall be authorized for three-month increments.

5. The level of utilization of perennial forage in Pahrump Allotment will not exceed 40%. Chemehuevi, Cronese Lake, Piute Valley, Clark Mountain, Horsethief Springs, and Valley Wells are in fair or poor condition and utilization will not exceed 30% until condition class improves. Utilization shall be light (40%)on all key species.

6. Construction and maintenance of range improvements in desert tortoise habitat are limited to current biological opinion. For all construction, operation, and maintenance of range improvements involving land disturbance in desert tortoise habitat the following requirements apply:

    A. Surface disturbance during construction of range improvements shall occur on previously disturbed sites and shall be minimized whenever possible. Routine vehicle use shall be limited to existing roads and disturbed areas, and off-road vehicle activity

shall be held to a minimum. Construction of new roads shall be minimized. Construction of new or replacement facilities shall be carried out only from October 15 to March 15, unless specifically authorized due to safety or emergency considerations. After completion of the project, the disturbed soil shall be blended and contoured into the surrounding soil surface. To reduce attraction of desert tortoise predators, debris and trash created during construction or maintenance of a facility will be removed immediately.

B. Range improvement construction, operation, and maintenance shall be modified as necessary to avoid direct impacts to desert tortoises and their burrows e.g., construction of fences or pipelines near tortoise burrows shall be avoided. Existing access and areas of disturbance shall be utilized when trenching a section of new pipe or during performance of maintenance. Any hazards to desert tortoises that may created, such as auger holes and trenches, shall be monitored by a biological monitor at least twice daily for desert tortoises that might become trapped. These hazards will be eliminated before workers leave the site.

C. Prior to land-disturbing activities, a field contact representative (FCR) will be designated to ensure compliance with protective measures stipulations for the desert tortoise and will be responsible for coordinating with the Service. A FCR will have the authority and responsibility to halt activities in violation of the Service stipulations.

D. Only authorized personnel are permitted to handle desert tortoises. If construction or maintenance of a range improvements endangers the life of a desert tortoise then authorized persons may move the animal a short distance away or hold the animal overnight to release it in the same area the next day.

E. All construction and maintenance workers shall strictly limit their activities and vehicles to areas flagged or cleared by persons authorized by the Service. When off-road use with equipment is required, the lessee is to notify the BLM two working days prior to construction or maintenance of a facility.

7. In Category I of Ord Mountain, Pilot Knob, Cronese Lake, Harper Lake, Clark Mountain, Jean Lake, Kessler Springs, Lanfair Valley, Piute Valley, Valley View, and Valley Wells Allotments authorization of ephemeral forage shall occur when 350 pounds of air dry-weight per acre or more of ephemeral forage is available.

8. In Clark Mountain, Jean Lake, Kessler Springs, Lanfair Valley, Piute Valley, Valley View, and Valley Wells Allotments no new or replacement cattle water sources shall be constructed within ½ mile of Category I unless an overall benefit to the desert tortoise. Concurrence between the Service and the BLM shall be required to determine whether a benefit would occur. Only

those new range improvements which will not create conflicts with desert tortoise populations shall be allowed.

9. For Clark Mountain, Jean Lake, Kessler Springs, Lanfair Valley, Piute Valley, Valley View, and Valley Wells Allotments in Category I habitat no temporary, non-renewable use shall be authorized except in allotments with good range condition or better. Utilization shall be light (no more than 40 percent) on all key species. Galleta grass shall be a key forage species wherever it is found. New key areas shall be established in areas accessible to cattle and within ¾ mile of water sources.

10. Grazing use shall be limited to November 1 to February 28 in the Jean Lake Allotment.

11. Through manipulation of water sources in the Lanfair Valley Allotment, the BLM shall encourage cattle use of non-desert tortoise habitat and discourage use of Category I habitat in the southern portion of the allotment.

12. In Piute Valley Allotment, cattle shall be removed and turn off water to cattle troughs (unless needed for wildlife) in Category I habitat east of the power line road.

13. In the Valley View Allotment, cattle water sources shall be managed to discourage use of category I habitat.

14. In the Valley Wells Allotment, cattle water sources shall be managed to encourage summer use by cattle of the higher elevation portions of the allotment, out of Shadow Valley. Construction of pipeline P5 and P6P (BLM, 1991) to establish water sources outside of Category I habitat. However, no new or replacement water sources shall be constructed along these pipelines in Category I habitat.

15. Cattle use of Category II habitat on the west end of Ord Mountain Allotment shall be discouraged through management of water sources.

16. The Pilot Knob Allotment shall develop a five-pasture deferred rotation grazing system. Utilization on ephemeral forage shall not exceed 20 percent throughout the allotment. Grazing use on Pilot Knob and Cronese Lake Allotments is based on temporary, non-renewable forage [perennial] use only at a maximum of 720 and 500 AUMs, respectively.

17. A two-pasture rotational grazing system shall be implemented for the Harper Lake Allotment.

1/ This abbreviated list of terms and conditions for grazing use is from current biological opinions and it does not supercede specific direction or requirements detailed in the biological opinions.

APPENDIX C

Guidelines for Domestic Sheep Management in Bighorn Sheep Habitats

The following is excerpted from Appendix C of *Mountain Sheep Ecosystem Management Strategy in the 11 Western States and Alaska.* U.S. Department of the Interior, Bureau of Land Management. 1995. Rept. BLM/SC/PL-95/00+6600. 79pp.

Guidelines for Domestic Sheep Management in Bighorn Sheep Habitats

The Bureau of Land Management desires progressive bighorn sheep management compatible with appropriate grazing on public lands by domestic sheep. It is recognized by State and Federal Agencies, bighorn sheep organizations, and the domestic sheep industry that:

1. There appears to be some diseases that are shared by domestic and bighorn sheep. There is evidence that if bighorn and domestic sheep are allowed to be in close contact, health problems and die-offs may occur. Some diseases may be transmitted between both species;
2. There are bighorn sheep die-offs that occur with no apparent relationship to contact with domestic sheep;
3. The above two observations are both valid and not mutually exclusive;
4. Bacterial pneumonia are not the only diseases of concern, although perhaps they are the most catastrophic;
5. The risks of disease transmission are often unknown; they may, however, be site specific, and;
6. Reasonable efforts must be made by domestic sheep lessees and wildlife and land management agencies to minimize the risk of disease transmission, and to optimize preventative medical and management procedures, to ensure healthy populations of bighorn sheep and domestic sheep.

In recognition of the above factors, the guidelines set forth below should be followed in current and future bighorn/domestic sheep use areas.

1. State wildlife and Federal land management agencies, bighorn interest groups, and domestic sheep industry cooperation and consultation are necessary to maintain and/or expand bighorn sheep numbers.
2. When agency and industry agreement has been reached to maintain and/or expand bighorn sheep numbers, the agencies and the domestic sheep industry will be held harmless in the event of disease impacting either bighorns or domestic sheep.
3. Domestic sheep grazing and trailing should be discouraged in the vicinity of bighorn sheep ranges.
4. Bighorn sheep and domestic sheep should be spatially separated to discourage the possibility of coming into physical contact with each other.

5. Buffer strips surrounding bighorn sheep habitat should be encouraged, except where topographic features or other barriers prevent physical contact between bighorn and domestic sheep. Buffer strips could range up to 9 miles (13.5 kilometers) depending upon local conditions and management options.
6. Domestic sheep should be closely managed and carefully herded where necessary to prevent them from staying into bighorn sheep areas.
7. Trailing of domestic sheep near or through occupied bighorn sheep ranges may be permitted when safeguards can be implemented to adequately prevent physical contact between bighorns and domestic sheep.
8. Unless a cooperative agreement has been reached to the contrary, bighorn sheep should only be reintroduced into areas where domestic sheep grazing is not permitted, and the allotment(s) in which bighorns are to be introduced should not have been used for domestic sheep grazing for two or more years prior to the bighorn release.
9. In certain special circumstances, extraordinary precautions will be followed to protect federally listed threatened or endangered subspecies; State listed subspecies; Federal candidate subspecies; and BLM Category II populations (BLM Range wide Plan for Managing Habitat of Desert Bighorn Sheep).
10. For desert bighorn sheep (*Ovis canadensis nelsoni, O.c. mexicana, and O.c. cremnobates*), the following additional guidelines are recommended:
    a. No domestic sheep grazing should be allowed within buffer strips less than 9 miles (13.5 kilometers) surrounding desert bighorn habitat, except where topographic features or other barriers prevent physical contact.
    b. Domestic sheep trailed and grazed outside 9 miles (13.5 kilometers) buffer and in the vicinity of desert bighorn ranges should be closely managed and carefully herded.
    c. Unless a cooperative agreement has been reached to the contrary, domestic sheep should be trucked rather than trailed, when trailing would bring domestic sheep closer than 9 miles (13.5 kilometers) to occupied desert bighorn sheep ranges, especially when domestic ewes are in estrus.

11. These guidelines will be reviewed every 3 years by a work group comprised of representatives from the livestock industry, State wildlife agencies, BLM and bighorn sheep organizations.

APPENDIX D

List of Preparers

Name	Office	Position
Kim Allison	Ridgecrest Field Office	Rangeland Management Specialist
Anthony Chavez	Barstow Field Office	Rangeland Management Specialist
Larry Foreman	District Office (Riverside, CA)	Wildlife Biologist
Bernice McProud	Needles Field Office	Rangeland Management Specialist
Larry Morgan	District Office	Rangeland Management Specialist
Alex Neibergs	Ridgecrest Field Office	Wild Horse and Burro Specialist
Bob Parker	Ridgecrest Field Office	Wildlife Biologist
Hunter Seim	Palm Springs-South Coast FO	Wilderness Specialist

APPENDIX E

NATIONAL FALLBACK STANDARDS

Soils:
Upland soils exhibit infiltration and permeability rates that area appropriate to the soil type, climate, and land form.

Riparian/Wetland:
Riparian-wetland areas are in properly functioning condition.

Stream Function:
Stream channel morphology (including but not limited to gradient, width/depth ratio, channel roughness and sinuosity) and functions are appropriate for the climate and land form.

Native Species:
Healthy, productive, and diverse populations of native species exist and are maintained.

NATIONAL FALLBACK GUIDELINES
For
GRAZING MANAGEMENT

1. Management practices maintain or promote adequate amounts of ground cover to support infiltration, maintain soil moisture, and stabilize soils.

2. Management practices maintain or promote soil conditions that support permeability rates that are appropriate to climate and soils.

3. Management practices maintain or promote sufficient residual vegetation to maintain, improve, or restore riparian-wetland functions of energy dissipation, sediment capture, groundwater recharge and stream bank stability.

4. Management practices maintain or promote stream channel morphology (e.g., gradient, width/depth ratio, channel roughness and sinuosity) and functions that are appropriate to climate and land form.

5. Management practices maintain or promote the appropriate kinds and amounts of soil organisms, plants and animals to support the hydrologic cycle, nutrient cycle, and energy flow.

6. Management practice maintain or promote the physical and biological conditions necessary to sustain native populations and communities.

7. Desired species are being allowed to complete seed dissemination in one out of every three years (Management actions will promote the opportunity for seedling establishment when climatic conditions and space allow.)

8. Conservation of Federal threatened or endangered. Proposed, Category 1 and 2 candidate, and other special status species is promoted by restoration and maintenance of their habitats.

9. Native species are emphasized in the support of ecological function.

10. Non-native plant species are used only in those situations in which native species are not readily available in sufficient quantities or are incapable of maintaining or achieving properly functioning conditions and biological health.

11. Periods of rest from disturbance or livestock use during times of critical plant growth or regrowth are provided when needed to achieve healthy, properly functioning conditions (The timing and duration of use periods shall be determined by the authorized officer).

12. Continuous, season-long livestock use is allowed to occur only when it has been demonstrated to be consistent with achieving healthy, properly functioning ecosystems.

13. Facilities are located away from riparian-wetland areas wherever they conflict with achieving or maintaining riparian-wetland function.

14. The development of springs and seeps or other projects affecting water and associated resources shall be designed to protec the ecological functions and processes of those sites.

15. Grazing on designated ephemeral (annual and perennial) rangeland is allowed to occur only if reliable estimates of production have been made, an identified level of annual growth or residue to remain on site at the end of the grazing season has been established, and adverse effects on perennial species are avoided.